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REPORT OF A CASE OF MEMBRANOUS PERICOLITIS — DIAGNOSIS CONFIRMED BY ROENTGENOGRAPHY AND LAPAROTOMY.

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Oftentimes, the presence of pain and tenderness in the right iliac quadrant leads the surgeon to make hastily the diagnosis of appendicitis. Not very infrequently, this hastily-made diagnosis is a mistake due to one or more factors: superficial examination of the patient, non-utilization of the more modern diagnostic aids (the X-rays especially), lack of sufficient knowledge of such congenital or acquired pathologic entities as occur within the abdominal cavity, etc.

It is not rare to meet patients in whom the successful, though needless, removal of a normal appendix has not been followed by any improvement in health; nor is it uncommon to meet patients to whom the successful removal of a diseased appendix has brought only a partial alleviation of the abdominal discomfort of which they previously complained.

A more thorough examination of these unrelieved or only partially relieved patients shows that the existence or co-existence of one or more of the following pathologic conditions: disease of the gall-bladder and biliary tracts, abnormally movable right kidney, right adnexal disease, enterocolitis, Lane's kink, Jackson's pericolic membrane, etc., was not recognized either previous to, or at the time of, the removal of the appendix. It goes without saying that any of the aforementioned conditions may co-exist with an appendicitis or may exist in the absence of any pathologic alteration of the appendix.

The increasing frequency of these humiliating diagnostic errors and unfortunate operative failures led Jackson[1] to publish some interesting observations proving that "in cases of membranous pericolitis, the patients are not often cured by the removal of the appendix vermiformis but they can be cured by the removal, partial or complete, of this adventitious peritoneum"; led Mayo[2] to write a paper earnestly recommending "that the terminal four inches of the ileum be examined in all cases where it is convenient to do so when the abdomen is open, and especially should this be done when the condition of the appendix at operation does not show sufficient change to account for the serious symptoms which demanded operative procedures."

The importance of correct pre-operative diagnosis is emphasized by the fact that the surgeon naturally selects the incision which affords the easiest access to the seat of disease.

In abdominal operations, that incision is most appropriate which best fulfills the following two desiderata: minimal weakening of the abdominal wall and easy exposure of the involved tissues or organs.

I find that button-hole sized incisions and McBurney's muscle-splitting operation, though well adapted to many cases of non-suppurative appendicitis, are to be rejected in cases of appendicitis complicated by pus formation or in those in which the location of the appendix is anomalous. Furthermore, the fore-mentioned incisions possess the disadvantage of not allowing easy correction of a Lane's kink or exposure and removal of a Jackson's membrane. In cases diagnosed appendicitis which do not present well-marked clinical symptoms of that disease, I find it helpful to employ, in the female, an infra-umbilical median incision and, in the male, a vertical incision in or near the right linea semi-

1. Jackson: Membranous Pericolitis, Western Surg. and Gynec. Trans., 1908, p. 209.

2. Mayo, Chas. H.: Intestinal Obstruction Due to Kinks and Adhesions of the Terminal Ileum, Surg., Gynec. and Obst., 1911, XII, 227.

lunaris, the length of the incision being determined by the exigencies of the individual case.

Mr. Nick Thal, aged 42 years, stable-man by occupation, was admitted to the Cook County Hospital (case No. 510,338) with the diagnosis of chronic intestinal obstruction, duodenal ulcer and cholangitis. The patient does not recall ever having been sick previous to his present trouble. During the last two years, he has suffered from chronic constipation and from a constant diffuse dull pain in the right side of abdomen. This pain varies in intensity and is oftentimes accentuated over cecum and hepatic flexure. During this period, he has lost about seven pounds in weight. Most of the time, he is troubled

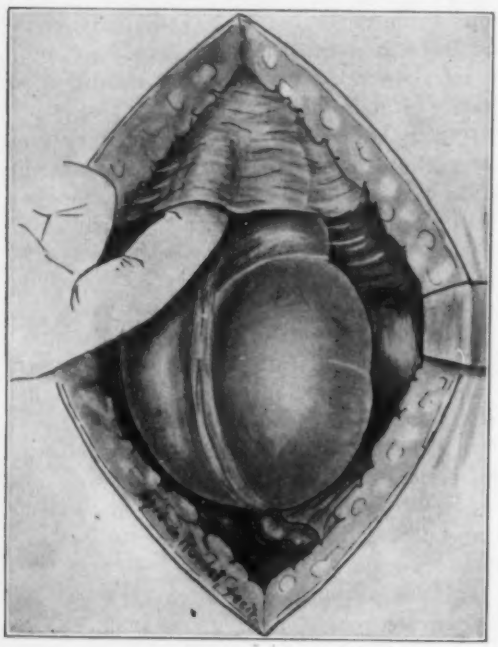

Fig. 1.—Finger Passed Beneath Membrane.

with peculiar sensations in the head and dizziness and ringing in ears. No history of chills or vomiting; coughs very little; never has had hemoptysis.

Examination: head and neck, negative; heart, negative; lungs, area of diminished resonance over left lung anteriorly and a few mucous râles; abdomen, whole right side is painful, no rigidity. When patient takes a deep breath, right kidney is distinctly palpable; the cecum is enlarged and plainly palpable as a tender, firm, elongated mass.

Repeated examinations of the sputum never showed the presence of tubercle bacilli. The urine, outside of an occasional granular cast, gave the normal findings. Examination of feces: dark clay color; no occult blood; abundance of muscle fibers. Leucocyte count, 6,400; polymorphonuclear neutrophiles, 78 per cent.; lymphocytes, small mononuclear, 12 per cent.; large mononuclear, 8 per cent.; eosinophiles, 2 per cent.

Several examinations of the gastric contents, one of which is reported below, were made, but outside of some motor absorptive insufficiency, they revealed nothing unusual.

Ewald test meal:

Amount, 142 cc.
Grayish yellowish color.
Odor, sour.
Occult blood.
Gastric mucus, abundant.
Reaction to litmus, acid.
Free HCl (indicator), 47.
Combined HCl (indicator), 23.
Total acidity (indicator), 70.

A bismuth test meal was given and an x-ray picture taken ten hours later. This radiogram showed local stagnation in the ileo-cecal region, demonstrating particularly well, the dilated cecum, and also the retardation of the passage of the bismuth into the transverse and descending colon.

Hygienic, dietetic and medicinal measures having proved unavailing, it was decided to perform a laparotomy.

Operation: April 25, 1913. Nitrous oxide gas anesthesia. Incision eight centimeters in length, half above and half below omphalo-spinous line, one centimeter to mesial side of the right linea-semilunaris. Forcible retraction of the edges of the wound. Exposure of the appendix, cecum and ascending colon. The appendix, though macroscopically unchanged, was removed.

There was a transparent vascularized veil-like structure about eight centimeters wide extending across and compressing the ascending colon. This membrane did not extend as far down as the cecum nor did it reach as far up as the hepatic flexure. It was distinct from the peritoneum of the underlying colon and as previously stated did not at all involve the cecum. The colon and cecum below the point of obstruction showed great distension. This film-like membrane could be moved over the underlying colon; it was continuous with the peritoneum on the outer parietal wall and lost itself on the parietal peritoneum tc inner side of colon. The vessels of this membrane were continuous with those of the parietal peritoneum. No ileal kink was present. The fecal stasis was apparently due to the constriction exerted upon the underlying colon by this diaphanous membrane. This adventitous membrane was divided along its entire vertical axis, resected and the stumps transfixed with catgut ligatures. Closure of abdominal wall. Duration of operation, seventeen minutes.

Cotte[3] in a case showing the same pathologic findings, effected an exclusion of the ascending colon by implanting the ileum in the transverse colon.

3. Cotte, G. X.: Apropos de la pericolite membraneuse, Lyon Chir., 1913, VII, 63.

On April 29, 1913, following the oral ingestion of two ounces of magnesium sulphate, the patient had first post-operative bowel movements. Since that time he has had daily bowel movements, usually unprovoked by cathartics or unsolicited by enemas. He was advised as to a correct regimen so as to limit intestinal fermentation, irritation and putrefaction. It is agreed that in these cases regular habits, antifermentative diet, occasional catharsis, and above all abdominal gymnastics and massage are important after-considerations.

Patient was seen five months after operation; it was then ascertained that he was having daily bowel movements and apparently was cured of the habitual constipation and the attending disturbances from which he had suffered previous to the operation.

I have reported this case to emphasize: 1. The fact that acute or chronic pain in the right iliac quadrant is not pathognomonic of appendical inflammation, acute or chronic, but is symptomatic of many other pathologic states of the appendix vermiformis and neighboring organs. 2. That in cases thought to be appendicitis but not presenting the classical clinical picture of that disease, it is advisable that the operative incision employed be such as to allow not only the removal of the appendix but also the exclusion or removal of an ileal kink or of a pericolic membrane or of both. 3. That in the above reported case and in analogous cases, the digestive disturbances and habitual constipation complained of are apparently due, wholly or in part, to this film-like membrane which by compressing a segment of the colon, materially restricts the expansibility of the intestinal wall, hampers peristalsis and causes stasis in the cecal region. 4. That in obscure disturbances of the gastro-intestinal tract, it is well, previous to operation, to utilize the diagnostic advantages offered by Roentgenography.[4]

TECHNIC AND RESULTS OF INJECTIONS OF ALCOHOL FOR PAIN IN TUBERCULAR LARYNGITIS

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During the last year or two we have seen reports of blocking the internal branch of the superior laryngeal nerve by alcohol for those extremely painful conditions of the larynx due to tubercular ulcerations.

4. Satterbee and Le Wald: Some Apparently Obscure Conditions of the Gastro-intestinal Tract and the Practical Application of the Roentgen-ray in Their Diagnosis, Jour. A. M. A., 1911, LVII, 1955.

For some time Rudolf Hoffman of Munich has been doing some work along this line, and his results in producing local anesthesia in the larynx have been very good.

Dr. H. Horn of San Francisco reports a number of cases with no ill results.

A great deal of work on the injection of alcohol for neuralgias has been done by Dr. H. T. Patrick of Chicago, and many fine results reported by him.

Much of the work that has been done in regard to the relieving of these painful conditions has been done on tubercular laryngeal cases which were shortly doomed to die and which had been suffering for some time. But why wait? Why not as soon as we see that these patients are not eating as well as they should on account of their sore throat, why not block this nerve at once, instead of waiting till our treatment with orthoform, anesthesin, lactic acid, etc., produce no longer the desired results?

Of course, to get the desired results from the alcohol injections, the ulcerated condition must be in that part of the throat in which the parts are innervated by the internal branch of the superior laryngeal nerve.

The superior laryngeal nerve is the sensory nerve of the larynx, it arises from the ganglion of the trunk of the pneumogastric nerve and divides into two branches, the external and internal.

The internal branch of the superior laryngeal nerve is the one in which we are interested; it enters the larynx through the thyroid membrane and lies in close relation to the superior laryngeal artery. After passing through the thyroid membrane, the internal branch of the superior laryngeal nerve breaks up into smaller branches supplying the interior of the larynx, mucous membrane of both surfaces of the epiglottis, the back of the cricoid cartilages and the arytenoid muscles, after which it communicates with the recurrent laryngeal nerve which is the motor nerve of the larynx.

Dr. H. T. Patrick of Chicago has done a great deal of work on the injection of alcohol for trifacial neuralgia.

The solution he uses is as follows:

Cocaine muriat, grains	i to ii
Alcohol	3 iii, SS
Aqua dist., qs. ad	℥ SS

In injecting the internal branch of the superior laryngeal nerve I have never used any cocaine in my solution. The only pain that has been complained of is directly following the injection of the alcohol, so by the time the cocaine, if used, would take effect the pain would to a great extent have disappeared from alcohol effects alone.

Local anesthesia of the skin, before the injection, could be done, and I can conceive of no contra-indication to this, but I have never done it and do not consider it at all necessary. In a very nervous or sensitive patient this might be advisable at times, especially if the skin were very tough. If I found it necessary to anesthetize the skin preliminary to injecting the alcohol I should use ethyl chloride, for in attempting to anesthetize the skin by the injection of some local anesthetic as much pain would be caused as if the solution itself were injected.

I use for the injections a Record 2 cc. syringe, with a needle filed across and so blunted to avoid the danger of injuring the superior laryngeal artery which lies in close proximity to the nerve in which we are so interested at the present.

I have used an alcoholic solution varying from 50 to 85 per cent. That of the lesser strength I find just as satisfactory and in some ways even better than the stronger solution. In the first place I have found that the stronger solution causes more pain and, of course, there would be more hardening of the tissues with this solution than the weaker one. The results of the injections with the 50 per cent. solutions were just as good in relieving the pain and would seldom call forth any complaint of pain or great discomfort.

We have used the solution warmed as advised by Dr. Horn of San Francisco and really think this is the best method, but we have also used it cold and have noticed no more complaint one way than the other.

Technic.—This operation can be done either in the office or at the bedside of the patient, but in either case antisepsis should be practiced as in any operation.

The syringe and needle should be wrapped in sterile gauze and boiled, the alcohol (of which we use a 50 per cent. solution), is placed in a sterile medicine graduate. Exactly 3 c.c. of this solution is prepared for each nerve, although we have never found it necessary to use over 2 c.c. for the injection of any one side. If it should be advisable to inject over 2 c.c. at any one time the syringe can be easily removed from the needle and more of the solution drawn up into the barrel of the syringe, then the syringe can be reattached to the needle and as much more of the solution can be injected as is desired.

The patient should be in a recumbent position with the head slightly thrown back, thus putting the muscles of the neck on a stretch. He should be told that the necessary work will cause him very litle pain and the discomfort will only last for a very short time. In this way you can in most cases gain the confidence of your patient, which will help greatly in the work you wish to do.

The nerve which you wish to locate is situated just above the upper edge of the thyroid cartilage and about one-third the distance from its outer edge. As to exact measurements, I have usually found the nerve just 3 c.m. from the incisura thyroideæ.

If you will press at this place with your finger nail, and you are directly over the nerve, there will be a sensation of pain. This I have found to be true in most cases, but it is not to be absolutely relied upon. The skin should be sterilized with iodine, and as soon as you have to the best of your ability located the region of the nerve, the skin is picked up between the thumb and forefinger and the needle inserted with a slow pushing and twisting movement. On account of the dullness of the needle this is the most painful part of the whole operation as a usual thing. After the needle has passed through the skin I then insert it according to Horn's method: that is, slowly push the needle 1½ c. m. perpendicularly to the skin and move the point slowly around in all directions till the patient complains of a sharp pain in the ear. Sometimes instead of complaining of a pain in the ear he locates it as being in the jaw, and one patient said there was at the same time as the pain was felt in the ear also a sharp pain in the arm on that side. In some cases there will be no sensation of pain in any special location, so it will be necessary to inject your solution, hoping that you are in proximity to the nerve.

The solution should be injected slowly, about five minutes being used in injecting the whole amount, and while injecting it the point of the needle should be moved about a little in all di-

rections. On withdrawal of the needle it will be found that there is usually hardly a drop of blood at the location of the puncture, due to the fact of using a dull-pointed needle. A little flexible collodion placed over the puncture completes the operation.

On account of the emaciation in most tubercular cases, especially those in the late stages of the disease, the injection is fairly easy to make. In all these cases the landmarks are easily to be made out and the distance which it is necessary to push the needle in is not as great as it would be, of course, in the average normal individual.

I have had very little trouble indeed in making these injections the first time tried, but if after the injection you get no results, do not hesitate to repeat the operation the next day. It can do no harm, but, of course, insert the needle at a little different place. If your ulceration is in a location which is not innervated by the internal branch of the superior laryngeal nerve, you can not expect any results, or if the ulceration is so extensive that it not only covers the parts supplied by this nerve, but also extends into other parts, you will then only get fair results.

Within five minutes following the injection, if you have succeeded in blocking the nerve, you will notice some benefit.

Miss R., aged 25 years, first came under our observation March 12, 1913. She had been in the city for some time, but had been under the care of no physician. Her illness dates back to about two years ago following a bad cold.

At the time we first saw her both lungs were badly involved and she was running an afternoon temperature of 102 to 103. She was quite emaciated and weak and said that for the last week or ten days it had been almost impossible for her to eat at all.

After a thorough cleansing of the throat and anesthetizing the parts, a 5 per cent. solution of formalin in glycerine was applied to the diseased area. The ulceration in this case was quite extensive, the pharynx as well as the larynx being involved.

Local treatments were tried for some time and at first she seemed to derive a great deal of good. She ate better and seemed to gain in every way. But by May 4 she was suffering a great deal again, so much so that it was impossible for her to take even liquids.

May 4 I made the first injection of alcohol 2 c. c. of a 60 per cent solution being used. Iodine was painted over the parts where the work was to be done. Just at the upper border of the thyroid cartilage and 3 c. m. from the incisura thyroideæ the needle was inserted with a slow twisting movement. It was pushed perpendicularly 1½ c. m. and the point of the needle was slowly rotated in all directions. In a moment she complained of a sharp pain radiating up to the jaw, but said she felt no sensation in her ear at all. At this point 2 c. c. of a 50 per cent. solution of alcohol was slowly injected. She made no complaint at the procedure, so the needle was quickly withdrawn and collodion put on the wound.

In less than five minutes she said that her throat felt very comfortable on the left side. About twenty minutes later she ate a very fair meal, but on account of the soreness of the right side she made considerable complaint. Four days from the time the nerve was blocked on the left side she requested that the same thing be done to the right side. This was done at once and the same technic followed, with the exception that on this side an 80 per cent. solution of alcohol was used. During the injection and for some few minutes afterward she complained of considerable pain. The relief on this side was just as marked as that on the left side, and she was very comfortable for about three weeks. About this time an ulceration appeared in front of the anterior pillar on the left side; also in the region of the uvula. This caused considerable suffering and inconvenience in eating, but she got along fairly well, as the larynx did not trouble her again up to the time she left us, which was June 2, 1913.

The ulceration in this case was very extensive from the beginning to the end. The results of the injection were all that could be expected until parts beyond those innervated by the superior laryngeal nerve also became ulcerated.

It is very interesting to see the change in the temperature curve in some of these cases. In her case before the injection the temperature varied from subnormal to 102 or over, while after the injections it never ran as high, and only once went above 101.

SOME OF THE COMPLICATIONS IN OBSTETRICAL PRACTICE.*

ANDY HALL, M. D., MT. VERNON, ILL.

In a fifteen minutes' paper it will not be possible to discuss all of the complications that may arise in obstetrical cases—hence I will only speak of two, puerperal infections the most fatal, and lacerations the most frequent.

Puerperal Infections.—It has been estimated that no less than 8,000 mothers die annually in the United States from puerperal infections. As a majority of women so infected recover it is

*Read before the Southern Illinois Medical Association, Dunnoin, November 7, 1913.

quite evident that this is a very prevalent disease, notwithstanding our knowledge of its cause and methods of prevention. It is further stated on good authority that out of every 400 confinements many suffer from infection and at least one of the women so infected loses her life. Many of those escaping death suffer sequelae, which often necessitates surgical interference in after years.

Can the frequency of this disease and the frightful mortality which it produces be lessened? Yes, it can be practically wiped out, provided the physicians and midwives who attend obstetrical cases will only apply the rules and technic taught in all up-to-date modern medical schools. Sterile hands, or what is better sterile gloves, sterile instruments if any are required, a minimum number of vaginal examinations, and last, but equally important are a sterile perineum and vulva. Any of these missing links in the technic may spell trouble.

It is my observation that practically all physicians doing obstetrical work do sterilize their hands and instruments, but that very few of them make any effort to sterilize the perinaeum or vulva before examining their patients or delivering them. If we would avoid the possibility of dangerous infections, the aseptic technic in obstetrical cases should be as perfect as that carried out in major surgical operations. No one competent to do surgery would expect to get the best results without first thoroughly preparing the field of operation.

In conversation with a physician not long since I was trying to impress on him the importance of disinfecting the perineum and vulva in confinement cases. He said it would not be possible in his locality, as his patients would not stand for any exposure and that many of them were delivered under cover. Other physicians have told me the same story concerning obstetrical practice in their localities. But with a little diplomacy and intelligent explanation as to the reasons why this should be done I think this objection can be overcome in practically all cases—in fact I know it can.

In my obstetrical bag as a necessary part of my equipment, I carry a duplex safety razor. And in doing an obstetrical practice of approximately fifty cases annually, in country and city, among the well to do and most refined, and the poor and most illiterate, I have never had one object to having the perineum thoroughly shaved and the vulva scrubbed with soap and sterile water; and then cleansed with an antiseptic solution. Furthermore this has been my practice in all cases. The shaving and cleansing includes the inner portion of the thighs.

Not long since a brother physician attended a case of confinement near a home where I had attended a case only a few weeks previously. He did not shave and scrub up his patient. I was told that his patient and her husband were both very much displeased as they thought he did not take the precaution that the case demanded.

Another thing that I carry in my obstetrical bag and use after emptying the bowel and preparing the perineum is an obstetrical sterile sheet. It does not cost much, protects bedding, and is much safer than the pads you will find in the ordinary home. Of course, if you have your patient in a hospital you can secure sheets about which there is no question.

It is possible for auto-infection to occur, and some of us have no doubt tried to ease our conscience and console ourselves by saying that this or that case of puerperal fever was due to an autoinfection. Yet the fact remains and the figures prove beyond any question of doubt that where the technic outlined has been carried out, and the chances of external infection have been made impossible, puerperal fever and resulting deaths have practically been unknown.

De Lee reports 2,193 cases delivered in the Chicago Lying-in Hospital without a fatality from infection acquired in the hospital. One woman died from peritonitis caused by the rupture of a gonorrheal pyosalpinx during a normal labor, and another from the rupture of a recto-uterine abscess during an operative delivery. Many other maternity hospitals report equally as good results. One hospital reports 8,373 deliveries without a death from infection ascribed to hospital care.

But, says one, these cases were attended in maternities and the same results cannot be obtained in private practice. What are the facts? In many of the large cities there are obstetric dispensaries where members of the staff and senior medical students attend the poor in their own homes. Worse sanitary surroundings than

exists in these homes could not be imagined. Yet, with the antiseptic technic carried out in these homes the result is better than that obtained in private practice. In the out clinic of Queen Charlotte's Lying-in Hospital, London, 4,165 women were delivered without a single death from infection. De Lee reports 7,000 cases delivered in the dispensary service of the Chicago Lying-in Hospital with but a single death from infection. He also reports a series of 3,990 cases handled exclusively by the dispensary staff, without a single death from any cause.

If these results can be accomplished in the slums of London and Chicago, why are they not obtained in the private homes here? Because many of us doing obstetrical practice are in too big a hurry, or we are too modest, or too lazy, or too indifferent to carry out the technic which we have been taught and know is necessary for the safety of our patients.

Lacerations are the most frequent of all complications in obstetrical practice. Under the best management, lacerations will occur. De Lee in his recent work says that 60 per cent of primiparae have tears of the first degree. Twenty-five per cent. of primiparae and 10 per cent. of multiparae have lacerations extending well into the perineal body, and 10 per cent have lacerations exposing the sphincter ani. Lacerations through the sphincter ani into the rectum occasionally occur in instrumental deliveries and in occipito-posterior and breach presentations. While we can not prevent all lacerations we can by proper management prevent some, limit many, and repair all. While it is no reproach to the obstetrician to have a laceration in his patient, he should be censured if he fails to detect a laceration and repair it at once. It is stated by good authority that at least one-half of the gynecologic cases that come to the surgeons are due to lacerations of the pelvic floor which have never been repaired.

Failure to detect and repair a laceration of the pelvic floor increases the chances of infection, causes faulty union or none at all, allows displacements of the bladder, uterus, ovaries and tubes, and later casts discredit on the attending physician.

Laceration of the cervix is best prevented by preserving the bags of water as long as possible, or until there can be no question about the cervix being fully dilated. Discourage all bearing down efforts of the patient during the first stage of labor. If I see a patient early in the first stage she is frequently given one-quarter grain of morphin hypodermically. If seen toward the end of the first stage, she is frequently allowed to inhale chloroform until the pain ceases.

During the second stage of labor when the head has distended the perineum fully, and is almost ready to be born, I give the patient chloroform to the surgical stage. Then if it appears that the head can be delivered without a tear I do so, but if a tear is inevitable, instead of allowing it to occur and take any direction and to some unknown depth, I take a sharp pair of blunt pointed scissors and make a cut down the side—do an episiotomy. If this does not give sufficient room for the head to pass repeat the operation on the opposite side. After the head has been born, wait for the pains to deliver the shoulders—hasty traction on the shoulders often causes a laceration. When the labor is completed we have one or two smooth incisions which can easily be approximated and sutured. I have done this operation many times, have never regretted it, and have never been censured for it so far as I know, and only once has an interested party raised any objection. In this case, it was a smart husband who thought his judgment was better than mine. As he was the man most interested in the outcome, his will prevailed. But when the labor had ended and we found a ragged tear exposing the anal muscles he had ample time to repent and apologize for his hasty advice.

Many lacerations are caused by the injudicious and unskilful use of forceps. When forceps are applied, don't get excited and make a hasty delivery; but keep cool, and pull the head down slowly, as the pains come on. When it has been brought down until it can be held with the fingers applied against the perineum, remove the forceps and if necessary do an episiotomy and deliver.

Since I began to use pituitrin I have but few cases requiring forceps delivery. In my opinion this preparation is one of the most useful remedial agents that has ever been given to the medical profession. But one word of warning: be sure that you have a normal presentation before you administer a dose of pituitrin.

A friend of mine not long since was called to the country to attend a confinement case. He found a bag of waters presenting, the os well dilated and what he supposed to be a head presenting. Thinking he would terminate the case, and be on his road home in a few minutes, he administered a dose of pituitrin. The next pain ruptured the bag of waters and to his surprise, consternation and discomfort, he found a shoulder and arm forced down into the pelvic outlet. The result was that he called another physician and after they had completely anesthetized the patient they almost failed to turn the child. He did not tell me whether the child was still-born or not, and I did not have the heart to ask him, as I deemed it unnecessary.

When a case of labor has terminated, don't consider your services at an end until you have carefully examined your patient for a laceration, and if any are found repair them at once, unless there are contra-indications, such as a severe loss of blood, inadequate light or lack of assistance. In that event return and do the necessary repair within the next twelve hours.

Lacerations properly repaired at once will almost invariably unite with good results by the time the patient should be out of bed in a normal labor.

If you are not getting sufficient fees to justify the loss of time required to attend these cases properly, raise your fees and explain to your patrons that they can better afford to pay you ten, twenty, or thirty dollars extra for special attention, than to have an invalid wife for months and perhaps years, then pay some gynecologist a couple of hundred dollars for an operation.

If the obstetricians will do their full duty today, they will rob the gynecologists of half their patients tomorrow, thereby earning the fees that would otherwise go to pay the gynecologists for correcting their blunders.

OBSTETRICS IN GENERAL PRACTICE*

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Obstetrics as an adjunct to the general practice of medicine might be a better title for this paper; by far the major portion of obstetric practice is not in the hands of the obstetric specialist but falls to the lot of the general practitioner, this is necessarily so and will undoubtedly continue to be the fact. For though this is a so-called age of specialization, it is only the limited few, the well-to-do and the very poor in our large centers that are now able to command the services of the obstetric specialist. This being true, the question arises, what can be done to improve the quality of the service that is being rendered to women who are engaged in the laudable pursuit of reproduction? It can not be taken out of the hands of the general practitioner, and that would not be a desirable solution, but we may insist on a more serious view being taken of obstetrics as a science and require a better preparation on the part of those engaged in this work. De Lee states that over 20,000 women die each year in the United States from the direct or indirect effects of labor, and every physician who has practiced the art of obstetrics to any extent must agree with his contention that the minority of labor cases can be considered normal. Also our own experience teaches us that practically all ailing, bearing women date their troubles from their first or some subsequent labor.

Unfortunately the laity in general have lightly considered the performance of this function a perfectly normal process, and more unfortunately the profession have acquiesced or encouraged this attitude. The result is that the feeling has endured that anyone can do obstetrics, and almost everybody does. At this point I wish to present a few arbitrary statements for your consideration:

1. Obstetrics is the most important branch of the practice of medicine. A little consideration will convince you of the truth of this assertion.

2. The science and practice of obstetrics has now reached a point of exactness, not exceeded and possibly not equalled by any other branch of our art.

3. There is no branch in which the science has been, in the past, so generally neglected or the practice fallen to so low a percentage of efficiency.

4. There is no branch of the practice of medicine in which patience, knowledge and skill give such satisfactory results.

It is almost an axiom that any physician, practicing obstetrics to any degree, can and should so inform himself that on review of any given case he can know positively whether he has or has not done good obstetrics. I am sure

*Read before the Chicago Medical Society, October 15, 1913.

also that this statement will not be seriously questioned; that the basis of most successful general practices is laid in good obstetrics. Why then is not better work generally done? I have not the time in a limited paper to go into this phase as deeply as I would wish, but hope it will be brought out in the discussion. I will only mention two, and the chief one is the light regard in which obstetrics is held by the laity and very generally by the profession.

The laity look to the profession for their inspiration along these lines, and if every physician who engages in this branch of practice would qualify himself and constitute himself a missionary in the cause of good obstetrics; if this could be brought about a revolution in our statistics of morbidity and mortality due to child-bearing would be the result.

The practice of the average obstetrician is very generally limited to the actual time of labor and includes from one to three post-partum visits. When we consider that the obstetric period covers the time from conception, through pregnancy, labor, the puerperium to involution, each with its possible attendant train of morbidity and mortality, we cannot fail to know how inadequate is such service. The physician's duties should begin with pregnancy and end only when his patient is on her feet in as near normal condition as it is possible to get her.

If we are to reduce the morbidity and mortality attending pregnancy and labor it is obvious that it is necessary to exercise a much closer supervision over our patients than the generality now receive and they should be taught to consult their physician when they observe the first sign of pregnancy.

I do not intend to go into detail in regard to practice but wish to briefly outline a few points which, if generally observed, would, in some degree, bring about the results wished for. For convenience I will divide these into the three principal divisions of the obstetric year: Pregnancy, labor and the puerperium and involution. To go into elementary obstetrics as seems to be necessary in a paper of this character, what the physician may do for his patient during pregnancy, may be briefly outlined as follows:

The patient should be thoroughly examined and an adequate history taken, pelvic measurements, in at least primiparae and multiparae who give history of abnormal labor. Urinalysis should be made monthly or better every two weeks. The patient may be instructed in matters that pertain to her general health and special attention given to elimination, and the care of the breasts in preparation for nursing.

Signs and symptoms of abnormal conditions should be noted and may often be corrected. By attention to these and other details the comfort and well-being of our patients will be immensely increased, and the expectation of a successful labor be that much nearer realization, a condition advantageous to the physician as well as to the patient, and the physician himself will be placed in a much better position in that understanding fully the physical and mechanical condition of his patient he is much better equipped to do good work during labor and the subsequent period.

The average physician can do this, he can also be so prepared that he can go to the bedside ready for any emergency. Still pursuing elementary obstetrics, be can be clean, can insist on cleanliness on the part of his assistants and the patient. Brush, soap and water are very cheap and coupled with lysol and alcohol are very efficient, used as these articles should be in the conduct of labor. He can use rubber gloves, remembering that the rubber glove is not a substitute for personal cleanliness, but only an adjunct and not intended to cover dirty hands. He can also refrain from undue vaginal examinations. He can do episiotomy upon occasion, thereby preventing tears. When labor is ended he can make a thorough examination of the vagina and cervix, using a pair of retractors, and should immediately repair any tears of importance, having due regard to anatomical conditions; his object being, as nearly as possible, the restoration of the parts to normal conditions, his secondary object being to discourage infection.

The labor ended he can and should follow his patient through the puerperium and involution. There are many things that he can do during this period for the comfort and well-being of his patient. One of these is a practice I have adopted and used during the past ten years, namely cleaning the intestinal tract during the first twenty-four hours following labor, using salines, preferably magnesium sulphate in sufficient dosage, followed by an enema, if necessary.

My observation has induced me to believe that the early bowel toilet accomplishes these beneficent results: 1. The elimination of the temperature rise which ordinarily occurs the first few days after labor and which usually subsides promptly and permanently after thorough catharsis, a condition I use to meet with frequently and now rarely ever. 2. Also it seems to have a quieting influence on the establishment of lactation, the breasts being less turgid and consequently less painful and troublesome. 3. We all know that the early cleaning of the intestinal tract removes gas accumulation and helps in restoring muscular tone to the bowels.

He can and should give the patient close attention during the puerperium. He can insist on the knee-chest position, the patient lying on her stomach, or the Sims' position which favors the return of the uterus to normal position. Follow her to complete involution and see that she is left in as nearly normal condition upon discharge as it is possible to get her. The final examination should be insisted upon and conditions found fully noted.

There are many points in which the science of obstetrics has been immensely improved in the past few years, asepsis being easily chief, this alone having done more than any one factor toward lessening mortality in connection with labor. Another minor feature, but a distinct improvement, is the elimination of the slop diet that used to be insisted upon for the first 3 or 4 days after labor. There is no reason, in the ordinary case, why the patient should not have a fairly generous diet at this time, due regard being paid to the fact that she is in bed and not exercising. The introduction of bed calisthenics has also been a factor, in that its due employment helps to restore the general muscular tone, coupled with comparatively early standing erect and walking. The introduction of the pituitary extracts has unquestionably saved many a forceps operation.

No one ought to attempt a forceps or allied operation who cannot readily make a correct diagnosis of position and presentation by abdominal palpation alone or combined with vaginal examination. Nor ought he attempt repair of genital wounds without a good knowledge of the anatomy of the parts and the anatomical relations.

To quote De Lee again, an obstetrician is necessarily an internist, a surgeon and a pediatrician. A good obstetrician combines and uses the knowledge of these specialties as a necessary corollary of his obstetrical work.

To sum up, preventable mortality due to labor is, notwithstanding the advances made in the science, still far too frequent, but can be lessened and finally fixed to include only the unavoidable, when the profession and the laity, through the profession have been educated to think of obstetrics as on the high plane where it belongs and where the knowledge which is now accessible to us all is applied in actual practice.

32 NORTH STATE STREET.

ABSTRACT OF DISCUSSION.

Dr. W. A. N. Dorland: So far as the practitioner is concerned, I have been teaching, as I believe the rest of the obstetricians in this country have been teaching, that it is much better for a medical student to come out as a first-class diagnostician than it is for him to come out as an operator. I believe that it is probably a mistake in our curricula to emphasize to the student the importance of major surgery as it has been emphasized. You know the average student feels that he is destined to perform appendectomies and gall-bladder operations, and all the other major operations that we know of; and we also know that when he does get out he does not get appendectomies, gall-bladder operations, nor any of the operations he felt he would get. On the contrary, work among children and obstetrical cases comprise the cases that young practitioners have to contend with. We so often hear the statement made that the mortality of a given obstetrical condition, in the hands of the average practitioner, is so much, but in the hands of the obstetrician it falls to such and such a figure. That is a reflection upon our medical instruction, and I think we who are obstetricians in the different medical colleges should insist on bringing to the attention of our faculties the first importance of obstetrics to the medical student. I find that nine-tenths of my students do not like obstetrics, and the work passes into the hands of inferior people, like the midwife, who is absolutely incapable. We should teach surgical diagnosis, surgical technic and emergency surgery, and let the man who wishes to become the abdominal or major surgeon take a post-graduate course with some good man before he goes out into such work. If he does that he becomes a surgeon, and not a makeshift.

How about the fact that Dr. Hollenbeck has emphasized—the value of pelvimetric examination? And yet how many men even know the names of the pelvic diameters, or what measurements are expected? They go through the course in college, and then forget it—that is, the average man does. It is important that these things should be known; that these men should realize that the individual is carrying in her body an-

other individual, that she is excreting for two individuals, and therefore she is having a strain thrown upon organs which are so often neglected. Of course these things are improving. Obstetrics is growing in value in the college course, but it is a very slow growth, and in this process of evolution in instruction which I said we are having now we all recognize that obstetrics is being left largely, and the evolution is more in the line of laboratory work and surgical technic. And so I would emphasize better education in obstetrics, and banish the idea that the student is to be a surgeon; and I would advocate the cultivation of obstetric diagnosis, so that when the student comes out of college he will be able to recognize these conditions, and then apply proper treatment.

Just a point about the patient. I believe that every man should consider her condition as a normal condition. It is just as proper for a woman to become pregnant as it is for her to have her other sexual functions. But she should also be taught that there are grave possibilities, and she should be warned as to the most important of them, so that she can be ready to note them—her frontal headaches, her dizziness, her dimness of vision, a greatly increased vaginal discharge. She should know some of these things. With this general inculcation of the knowledge of possibilities of danger in the pregnancy, she is better prepared to advise her physician of things she has noted. That is self-diagnosis, and auto-diagnosis is important. The very first abdominal section I ever did was diagnosed by the patient—an ectopic pregnancy. She diagnosed her condition herself, because two years before she had had the same condition on the opposite side. Primiparous women should have some points of instruction given them. Multiparae know them by experience. The labor and the puerperium are the more spectacular portion of obstetrics, and more time and attention are usually given to them. But if there is instruction given in these practical points bearing upon gestation, I think a step has been taken in the right direction.

Dr. Charles S. Bacon: Of course I agree with Dr. Hollenbeck and Dr. Dorland as to the importance of a thorough training in obstetrics and of a careful and scientific practice of obstetrics. I will confine my remarks on the puerperium to three or four of the most important subjects.

First, puerperal fever. Puerperal fever, as to its causation, is rather a subject for "labor." The infection usually begins during labor, at least in the great majority of cases. As Dr. Stowe is not present and the management of labor has not been considered, I would simply emphasize the importance of unnecessary operations, unnecessary examinations, especially improper and unnecessary manipulations in the management of the third stage of labor, as being of great importance in the causation of puerperal fever. Some cases do arise during the puerperium, and reasonable care should, of course, be given to the dressing of the puerpera, the proper washing and the proper vulvar dressings, and care to avoid any manipulations that might lead to infection of the tract. But it is chiefly in the treatment of puerperal fever that we have to consider the subject in a discussion of the management of the puerperium. And here we might say that there has been a good deal of progress in recent years, although undoubtedly throughout the mass of the profession the changes in practice should be emphasized more perhaps than has been the case. Unnecessary interference in case of fever has resulted in a great deal of serious illness and mortality. A certain amount of fever is undoubtedly unavoidable. A morbidity of ten per cent is perhaps to be expected. There is such a thing as autogenous infection. Whenever these infections, which are generally light, occur, there should not be immediately a vigorous active treatment. On the contrary, conservative treatment is of the very greatest importance here. In fact, in all cases of fever we have to remember that we are not able by any active treatment to remove the invading germs or to destroy them by curettement or by douches, and these manipulations, we are all agreed, will do a great deal more harm than good. About all that we can do—and that is really a good deal—is to fortify the patient, to sustain the patient, to make her better able to combat the infection, and that, in the great majority of cases, she will do if she is properly treated. Rest and the management of the symptoms, the relief of pain by ice applications or sometimes by hot applications, elimination through the intestine, and general keeping up of all the eliminations, and particularly the supportive treatment by a proper diet, is the most, generally, that we can do. It is for the future to devise and bring forth a method of overcoming the infection, or, better, supporting the patient, so that she may overcome the infection, by means of serums or vaccines. I do not doubt that much progress will be made, probably within the near future, in that direction. We have not accomplished much as yet. But the main point is that unnecessary, foolish—foolish, because from our present knowledge we should know what we can do and what we cannot do—interference should be done away with as much as possible.

The next point I would consider is lactation. How important is lactation for the health and life of the infant we all know, and yet how very common it is for lactation to be abandoned. In almost every case a proper attention to details in the handling of the baby and the management of the mother and the care of the breasts will show that lactation can be, at least to a certain extent, carried on satisfactorily. The avoidance of infection of the breast is, of course, a matter of very great importance. The infection begins gradually, with little erosions about the nipples. Very minute care and attention to the details in the management of these early lesions is the proper way to prevent the infection of the breast.

Why a normal, healthy woman, who has been through a severe labor of twenty-four or thirty-six hours, should be kept for several days on a light diet or a slop diet, as the Doctor says, I cannot understand.

I see no reason why she should not have the same diet as in other conditions.

I believe that a woman who has gone through a severe labor and during the last weeks of pregnancy has endured a constant strain, can with advantage have a period of two weeks' rest, but this rest should not mean lying in bed all the time. It is undoubtedly of the greatest benefit to let the patient as soon as she can—after three or four days—begin movements, calisthenic exercises in bed. In that way she improves the circulation, so that by the end of the week she begins to get around gradually, walking around for two or three minutes at a time, and then lying down again several times in the day, but getting around more and more, so that at the end of two weeks she is in good condition. Thus she avoids being an invalid for some weeks, as she is likely to be if she remains in bed for two or three weeks.

Dr. Charles E. Paddock: The very concise statement of facts set forth in this paper is timely and I trust will be instructive. The principles and practice of obstetrics are either greatly misunderstood or are treated in an indifferent manner by the average physician doing general work.

There has been just as much progress in this branch of medicine as in any other, and the physician who continues to practice obstetrics as a side issue and does not recognize the above fact is doing the science of medicine a great injustice.

It is to be regretted that obstetrical cases are as a rule merely taken to help out the income, the physician looking forward anxiously to the time when he can refuse such cases. This means that the work is done in a half-hearted, careless way with little thought other than to get through as quietly as possible, and I believe I am right when I say that of all branches of medicine, that of obstetrics is the most neglected.

The woman must be educated to come to the physician early and be instructed how to live so that the process may be a normal one. It is due to such care that the patient escapes much of the pathology of pregnancy, labor and the puerperium.

Limit to the minimum the number of digital examinations during and after labor, using at the same time the most careful asepsis; and the puerperal infection, as mentioned by Dr. Bacon, will be an unknown quantity.

Much can be done for the patient in the puerperium to hasten involution, not only of the uterus but all the organs as well. Teach the patient some exercises or light calisthenics which she can use several times a day. Massage gently after five or six days the abdomen, this stimulating intestinal peristalsis and abdominal musculature.

Give the patient a more liberal diet than is usually the case.

Do all that is possible to establish lactation, and do not discontinue breast feeding without decided indication. I mention this because so frequently breast feeding is discontinued for trivial causes. Lactation favors involution of the uterus, which is of more importance than generally thought. Besides, human milk saves the lives of many babies.

WHO WILL DISCOVER THE CAUSES OF YOUTHFUL INSANITY?*

(ABSTRACT.)

BAYARD HOLMES, M. D.
CHICAGO

The Insanity of Adolescents—By all odds the most dreadful misfortune which can possibly befall the youth is insanity. The insanity of youth presents a problem of astounding magnitude. Our latest official information shows that in 1910 there were no less than 184,454 insane persons in the custody of the 347 public asylums of the United States. Of this number, 60,303 were committed during the census year, and of the total number committed we have reason to believe not less than 25 per cent were cases of youthful insanity. This disease is termed dementia praecox, and it is looked upon by alienists and by the keepers of the insane as absolutely irrecoverable.

Fate of the Youthful Insane—In the state of Massachusetts, according to the reports of 1911, only one patient with dementia praecox recovered out of each 1,500 cases of dementia praecox. It is an incurable and hopeless condition. The death rate from dementia praecox is very high during the first year, and in some institutions on account of the large number remaining over amounts to as much as twenty per cent of the admissions. After the first year the expectancy of a patient with this disease is in the neighborhood of eleven years.

The Causes of Youthful Insanity—The causes of youthful insanity are absolutely unknown. In ancient times these young persons were believed to be possessed of the devil, and in the early days of New England several of them were hung and others were punished by ecclesiastical courts established for the purpose of abolishing witchcraft. At the present time most alienists look upon dementia praecox as a psychogenetic disease, and due to the action of a "twisted idea," which has some sexual basis in shame or fear.

December 31, 1912, Fauser, of Stuttgart, published in the *Deutsche medicinische Wochenschrift* his experiments with the Abderhalden

*Read at a meeting of alienists and neurologists held under the auspices of the Chicago Medical Society, June 23-25, 1913.

reaction in cases of insanity, and in his subsequent paper in the same journal in the month of February he completed his statistics of the results in eighty-four patients. This research showed conclusively that dementia praecox is a disease in which the sexual glands undergo an early dystrophy. The blood of the dementia praecox cases uniformly catabolized the albuminous substance or fundament of the testicle, if the patient was a male, or of the ovary, if the patient was a female. Cases of manic-depressive insanity or any other form of insanity furnished blood which would do none of these things.

Treatment of Youthful Insane—If one asks today what can be done for the insane youth, we must shake our heads and say, not a thing is done in any public or private institution in the United States with any promise of improvement or cure. However, since the time of Savage, it has been observed that patients with dementia praecox with a febrile disease frequently become clear and occasionally recover. Bruce and Dide have both suggested that an artificial hyperleucocytosis might benefit the patient, and in the December, 1912, number of the *Tidske f. Retsmed. o. Psych., X*, p. 227, Halvar Lundvall, of Lund, Sweden, published the report of the use of the nucleate of soda, and hetol hypodermically in saturated solutions, in sixteen cases of dementia praecox whose blood he had studied for a long time before, and he showed that six of these patients made a recovery sufficient to allow them to pursue their previous occupations, while five others were greatly benefited.

The Known Causes of Other Insanities—The only insanity which has been thoroughly studied and of which an adequate cause has been discovered is called general paresis. It is due entirely to the effects of syphilis. Although no remedy has yet been discovered which will cure a patient with this disease, the Wassermann reaction, the use of salvarsan and perhaps other methods of treatment yet to be discovered, make the outlook in this diease much better than heretofore.

How Causes of Disease Are Discovered—In the past most discoveries of the cause of disease have been made by isolated physicians or scientists working single-handed and unsupported, but of late great advantage has been shown by the commission which was established to study cholera in 1882, and by the commissions for the study of the several tropical diseases and especially that for the study of yellow fever, all of which have brought forth rapid results, and made great financial undertakings possible.

Why Research on Insanity Is Neglected—The physicians who have attacked the problem of insanity have been obliged to work almost unaided and alone, and they have found the problem too complicated for this method of research. The states of New York, Michigan and Illinois have made feints at research into the causes of the insanities, but these researches have never been serious or protracted, and have so far resulted in little but discouragement. The London County Council has attacked the problem, but not with that horizon which promises favorable result.

Reasons for Hopeful Research—In spite of the fact that many persons consider insanity due simply to perversity of conduct, and look upon dementia praecox as the result of a twisted idea of a sexual nature, there still remain a great number of conscientious alientists and medical men who deem the symptomatology of dementia praecox adequate to call for research into the cause of the disease which costs the state sixty per cent. of all that is expended for charity. In the German-speaking countries since the paper referred to by Fauser on the Abderhalden reaction in diagnosing the insanities was published researches have begun in public and private asylums, and much work has already appeared which sustains Fauser's original thesis.

Direction for Research to Follow—It is well-known that hyperthyroidism is a disease which is excited by a superficial or external infectious or irritative process, sometimes by a tonsillitis, sometimes by an infection of the teeth or jaw, sometimes by appendicitis, and sometimes by other perfectly accessible conditions, and that it is unreasonable to expect a cure by the simple ablation of a portion of the thyroid. Now, in case of dementia praecox it is likely that the dystrophy or dysfunktion, as the Germans call it, of the genital gland is due to some distant and unsuspected toxic condition. It is possible that the primary disease may be a dysfunktion of some other gland which ordinarily balances up with the genital glands. Until some such source is discovered, it would seem wise to remove the tonsil, to rectify the teeth, to remove the appen-

dix and drain the gall-bladder, to keep the colon absolutely free from retardation, and in every way put the patient under the best possible conditions for spontaneous recovery.

Youthful Insanity in Earlier Forms—We have every reason to believe that dementia praecox is two or three years on its course when the patients are brought to court and committed to the asylum. Up to the present time none of these patients has been examined by the Abderhalden method before commitment. In school and at court troublesome or delinquent children should be examined by this method to determine whether or not they are showing the diagnostic symptoms of dementia praecox. The teacher and the probation officer must keep the possibility of this disease in mind in every troublesome case among adolescents.

CONCLUSION.

1. It is our contention that the responsibility of solving the problems of youthful insanity is in the hands of the state that expends such a large portion of its income at the present time in custody alone.

2. The very fact that youthful insanity is progressive and destructive in almost every instance is evidence of the strongest kind that it is due to a mechanistic, chemical or physical cause, and that it is subject to investigation and solution.

3. We are convinced by the teachings of medical history that there are no mysterious God-sent or devil-brewed diseases. There are no mystical, intangible, unapproachable sources of sickness and death. We have faith in the unity of natural phenomena and in the existence of adequate mechanistic causes for every malady, even though the major symptom of that malady may be a disordered mind.

4. To the modern scientific intelligence and in the everyday public opinion, there are no "hoodoos," no "evil eyes," no "curses," no "banshees," no "twisted ideas," or anything like them, adequate to drive annually fifteen full regiments of our brightest youths into a hopeless custody and start them on an irrevocable physical decline to end either in permanent confinement or in early death.

DISCUSSION.

Dr. Carl W. Sawyer, Marion, Ohio. I sometimes question whether or not dementia praecox is as incurable as we sometimes say. Most of the statistics come from the state institutions, where the cases are collected after they have reached the incurable stage.

If we investigate closely we can find that a number of them are caused by definite organic or functional changes.

At the Rockefeller Institute, in the semi-public institutes, and in a large number of private institutions where they are trying to work these cases out, the people know that the whole welfare of the public depends upon us. We have with us today the representatives who were sent directly by the governors of the states. I know I was sent here by the governor of Ohio. Governor Cox called several of the doctors together and said, "Whatever you want I will try to get for you, if it is reasonable," and I believe that he meant it. More legislation was put through in Ohio than ever before. I believe we have a chance now, and I would like to go back and tell Governor Cox that you gentlemen here have said that you want these things done; that something can be done for these people.

Dr. Holmes made one statement that I don't think is just right. I don't know how many here are at the heads of state institutions. I am not connected with one at all, so I am not speaking for myself in this. The men at the heads of these institutions are not at fault. I have visited a lot of them. I never saw so many earnest men as those at the heads of these institutions, but they are all held down by politics. I remember talking to a superintendent of an institution in New Jersey. I said, "Doctor, what do you do for them?" He said, "Nothing; we just feed them." He said, "Doctor, how can seven doctors take care of twenty-two hundred patients and make any effort to treat them?"

We must make a definite endeavor to fight this attitude.

Dr. H. C. R. Norriss, Enderlin, N. D.: Dr. Holmes' very able paper cannot be criticised on any point. He is entitled to a vote of thanks. We are very sorry that he did not have time to give it all, but we hope we will be able to see it. It will give us another viewpoint, which we need.

Dr. Harold N. Moyer, Chicago: I want to refer to some of the difficulties encountered. Six years ago I worked on the Civil Service Commission of the State of Illinois and, with my colleagues, had absolutely no interference whatever from the political powers in this state. The state service in Illinois is deplorably undermanned, because we cannot get the men. The civil service commission would say, we must have seven men, and we could only send up three. We have two and three hundred patients for a doctor in many of the places in our state hospitals. What are you going to do about it? I don't know. It is easy enough to say what you ought to do, but when you get up against the concrete facts and can't do it, what will happen?

Dr. W. F. Lorenz, Mendota, Wis.: Mr. Chairman:

You expressed yourself as not knowing why some of the men do not continue in the service, or why they are not attracted to the service. I have had some personal experience in the Illinois state service and can give you my personal impression. In the first place, you don't make the positions attractive from the monetary standpoint. You don't pay enough. You don't house them well enough. No opportunity is given a man to be married. He must sacrifice everything else when he enters the state service. Those things can be remedied, and I believe they affect very much the men who go into the service, and those who leave the service.

Dr. Moyer: I have taken those things up, too, and I am quite sure that that is the difficulty. I have urged on the state authorities that some of those things should be remedied, but the practical effect in Illinois has been this: You know as well as I do that we get the right fellows; they get trained, and in a year or two they go somewhere else.

Dr. Bayard Holmes, Chicago: One thing ought to be said, you don't have your service arranged. If a man wants to be a doctor, he wants to be a doctor. There is no chance to do any doctoring in the state service. The doctoring is not there. They don't want to cure them—they don't think they can. Put some medicine into it, some science, and have something done, something accomplished, and let these young fellows have an opportunity to study and to experiment, and not say to them, "Now, you are going to be an assistant superintendent, and become a bookkeeper."

Dr. Moyer: I am not satisfied that that is the real issue. We have in Illinois as noble a lot of men as you can find anywhere, and that statement is based on thirty years' experience. These men are doing earnest and noble work, but we can't get enough of them for the institutions.

Dr. Holmes: A man is put in as assistant superintendent when he is trying to be a doctor. You make all these men eat together, the doctors and their wives, all in one room. Some of these have dirty babies. There is no sense in that. I think one real fault is because the institutions are not scientific institutions, and are not conducted like hospitals, and when the men come out, they show that they have not been given opportunities to do actual medical work. They have been doing a routine work, and it is very, very poor, from a medical standpoint.

Dr. L. J. Pollock, Galesburg, Ill.: I believe I will take issue with both sides of the question. I have had some experience in state institutions in this state, and I will first take issue with Dr. Holmes. Although it is quite true that we do not as yet know the causes of many of the insanities, it must be remembered that it is only a few years since any department of medicine has attained a sufficient efficiency in pathology to recognize any changes. It is only since 1895 that in neurology we have been able to recognize any of the finer changes in pathology. The retardation that has occurred in psychiatry is only that common to general medicine, due to the deficiency of general pathologic technic, which has improved, as shown. The work of the school of Alzheimer is a stupendous work—one which is absolutely without any comparison in any of the departments of medicine, and despite this work we have never been able to discover any of the pathognomonic pictures of such diseases as manic-depressive insanities and dementia praecox.

I will also take issue with the statement of Dr. Holmes that there is nothing done in these institutions. There is a great deal done. I agree that there is not as much done as should be done. These cases are not as thoroughly studied as they should be studied. I am willing to make the statement that every man in institutional work is head and shoulders above the physicians outside. These men are particularly trained. These men, so to speak, particularly in the state of Illinois, meet in medical meetings, which they hold every day, where the patients are discussed. Every patient is given a more thorough physical examination than any patient coming to an ordinary physician on the outside. These cases are discussed in a scientific manner. Laboratory work is being conducted in these institutions. It must be recognized that the laboratory work associated with psychiatry is more difficult than that associated with general medicine. These diseases cannot be cured or treated by the ordinary methods in use in the practice of medicine. There is no empirical remedy. There is no reason for directing a criticism against a twisted idea. That means something—it is not a term. A twisted idea, as Dr. Holmes terms it, is really a criticism of the explanation of certain symptoms. These symptoms appear not only in dementia praecox and hysteria, but also in alcoholic insanity, paranoia, and other diseases. That may have some cause—something which is acting on the brain, which causes a twisted idea. So in that respect I take issue with Dr. Holmes.

With regard to getting men for the service, I think if a special effort were made to assure these physicians that they would be allowed to pursue a scientific course of study, and of the practice of medicine and surgery, we would have no trouble in obtaining men for the service.

Dr. T. B. Throckmorton, Des Moines, Iowa: I think there is nothing more inspiring than for young men to meet with their elders. I have always been taught to respect my elders, but it seems to me that from what small experience I have had in institutional work one of the drawbacks has been that the superintendent at the head of the institution has had entirely too much work to handle. I believe that if we had placed at the head of our state institutions superintendents who had nothing to do but superintend the medical aspect of the institutions, they could give more attention to the different cases and study them over, and the men under him could have the benefit of his greater experience, and there would

be more enthusiasm than at the present time. But where the man has to take into consideration the fact that boards of control or those in charge over him are more anxious to know the number of bushels of apples raised to the acre, or potatoes grown, or number of hogs raised, I believe that no man can give the proper supervision both to the farm and medical institution.

Dr. Bayard Holmes, Chicago: I am glad to be seriously attacked by Dr. Pollock. Everything he says in regard to this matter is only an actual demonstration that I am right about it. He has left the state service, after doing the best possible work in the position he was in. He left it because he was not given a chance to do his work, not properly paid, and had a better place outside. All the good men will leave that way. I don't want them to. I want them to stay because it is the best place, because it brings the greatest amount of honor and consideration from the public, and so I am very glad to have him say just exactly what he said, and I believe that you understand it.

I have attacked these things. I have a nasty way of saying nice things, and I have attacked these psychiatric institutions. I think that they have not lived up to their name, just the same as I feel that the state hospitals do not live up to their names. I am intimately acquainted with several state hospitals, and I am absolutely sure that two of them did not for three months have a working microscope in the institution. They did not have facilities for making an ordinary urinalysis, which the doctor performs in the back room, where he keeps his automobile supplies.

I feel that the research that has been done in Illinois, for example, has been done in as good a way as they could afford. The first two years in the life of the psychopathic institute it only had an appropriation of four thousand; the next two years, $12,500; the next two years, $17,700. That is not enough, nowhere near enough, not even a beginning. Besides that, the institution has had all the work of organizing the staff of the whole state into a homogeneous mass, and it has been an enormous work. That work has had a lot of detail in connection with it. Unfortunately, a lot of unnecessary detail work has been taken on in carrying out this work, too many stenographers and too few people to explain to those stenographers. That is what I have objected to. They have enormous files and nothing coming out of them. I have noticed when at the state institutions that they have shown me these files of histories, but I have not been allowed to get at them. I do not doubt but what they would show them to me, because they publish them. But that is not the point. What I would like to see is something going on in a serious manner, with a large number of capable individual men carrying on research work over a long time.

I do not believe that the civil service is a good thing in these institutions, anyway, because only once in a while can a good man get through those examinations, and get into the service and stay there.

Dr. L. J. Pollock, Galesburg, Ill.: Relative to the inference as to why I left the service, there seems to be a slight misunderstanding in Dr. Holmes' mind as to my reason. I was permitted to conduct my experimental work, and turned out a few small articles. It was because I wished to enlarge my activities, not because I did not like the service. I think the opportunity is there for any man who wishes to take it.

So far as the examinations are concerned, any physician could pass them.

INFANTILE CEREBRAL PALSIES.*

H. G. Hardt, M. D., Chicago.

Under this head may be classified symptoms of a varied pathologic lesion in the brain occurring in infancy. We may have a monoplegia, hydrocephalus, hemiplegia, paraplegia or diplegia. Some writers dwell more particularly upon one form than the separate forms which are clinically demonstrable.

Synonyms: — Little's disease — paraplegia; cerebral spastica (Heine); acute encephalitis; cerebral paralysis of children, spastic infantile hemiplegia (Benedikt); cerebral palsies of childhood; hereditary spastic paraplegia; hemiplegia in children; feeble-minded paralysis; spastic cerebral paralysis; congenital spastic paraplegia in children; infantile spastic diplegia.

Etiology.—Those who make a study of neurology have divided the etiologic factors into three groups; prenatal, natal and postnatal. The forms, according to Dieulafoy, of chronic encephalitis in children from birth to the period of the second dentition are often described under different names, according as they are designated by their anatomical lesion (hemorrhage, softening, porencephaly, lobar sclerosis), or by their major clinical syndrome (athetosis, hemiplegia, paraplegia, spasmodic diplegia, or Little's disease). They deserve to be studied as a whole, because, even though they present, as in the adult, varying symptoms according to the localization of the lesions, their course is marked by a common clinical basis. Paralysis with contractures, and intellectual troubles that may be slight or may end in low grade idiocy, are the elements of the syndrome common to almost all

*Read at a meeting of alienists and neurologists held under the auspices of the Chicago Medical Society, June 23-25, 1913.

forms of chronic infantile encephalitis. The fact that the brain of the child is incompletely developed at the time when the lesion makes its appearance accounts for this special clinical process. Let me add that the after-effects of infantile sclerosis may appear in youth in the form of epilepsy. The writings of Bourneville and of Strumpell have helped to elucidate these forms of infantile encephalitis. Their natural history has been accurately classified by Brissaud.

Cerebral Spastic Diplegia.

Cerebral infantile palsies have been described under three groups, or rather the etiologic factors have been placed in one of the three above mentioned divisions. The cases to be considered have occurred among the feeble-minded, 118 cases have been clinically examined. Of this number 61 are female and 57 male. This shows that the relative frequency is practically the same for either sex.

Of the total number there were 25 hemiplegic, 78 diplegic, 14 hydrocephalic and 1 paraplegic. Of this number 33 are subject to epilepsy and 44 had athetosis.

In regard to number or relative position of birth, 39 were firstborn; 26 second; 16 third; 6 fourth; 8 fifth; 14 sixth and later; the others unknown. Among these the condition was first noticed in 98 during the first year, 5 during the second, 6 during the third, 3 during the fourth, none the fifth, and 6 unknown.

In regard to the gestation and labor the records show 99 to have been without instruments and apparently normal; 19 abnormal, or with instruments.

The onset in 50 had an initial convulsion; the remainder not stated.

The assigned causes were: Prolonged labor; fall on head; fright; presence of an imbecile brother; smelling camphor; operation for tumor; morphinism; syphilis; consanguinity; measles; meningitis; alcoholism; tuberculosis and heredity, as well as fall during gestation,

chloroform, otitis media, grief, malnutrition.

In 25 per cent of cases a positive history of tuberculosis and alcoholism could be obtained. In 16 per cent meningitis was the evident exciting cause. Among the cases there were three blind and one deaf. In most of the cases the peculiarity dated from birth.

Pathology.—The lesions found in the various clinical groups to be described, depends upon the severity of the clinical manifestation, whether it be a convolution, lobe, hemisphere or a greater area that is involved. The sclerosis and atrophy which form the scar of the insult have much the same characteristic in all the different forms mentioned. It has, therefore, been spoken of by many writers as a "sclerotic atrophy."

The primary or initial cause many times remains clouded in obscurity, because no known warning of the time when it may have been brought about, whether due to trauma or disease was observed. In many post mortems, blood clots, the result of a hemorrhage, as well as cysts of various sizes have been repeatedly found. These failed to absorb because of being walled in and remain as a residue. The most characteristic universal finding is the marked contraction of the area or areas involved due to the sclerosis and resulting atrophy.

In a resume of 343 cases by Allen Starr the conditions found were as follows:

Porencephalus, a localized atrophy or agenesis, leaving a cavity in the cerebral hemisphere, which may be deep enough to open into the ventricle, 132 cases.

Sclerotic atrophy, an atrophic condition of the brain with an increase of connective tissue and disappearance of the nervous elements; affecting both hemispheres, or one only, or a part of one only, or limited to small areas in various parts, 97 cases. This is the terminal result of encephalitis (q.v.) and often results from maldevelopment from unknown causes acting on the fœtus.

Maldevelopment and apparent atrophic condition of the minute structures of the hemisphere, chiefly cortical, the cells resembling those of a newborn child, but with no apparent gross defects in the brain, 32 cases.

Atrophy, consequent upon the condition of softening produced by embolism of thrombosis, and limited in extent to certain arterial districts of the brain, 23 cases.

Meningo-encephalitis, a condition shown by thickening and adhesion between the pia and the brain, with destruction of the cerebral cells and atrophy of the cortex, 21 cases.

Cysts lying on the brain and producing atrophy by pressure, or associated with atrophy due to the original lesion of which the cyst remains as a trace, 14 cases.

Hemorrhage on or in the brain, as shown by the remains of a clot, or by hæmatin staining of a cyst, of the pia, or of the sclerotic tissue, 18 cases.

Hydrocephalus with extreme dilatation of the ventricles, so that the brain tissue is reduced to a mere wall about the cavity, 5 cases.

Little's Disease.—English, German and American writers are prone to use the term Little's disease in a generic sense to embrace all cerebral palsies in childhood. French writers, of the Salpetriere school especially, insist upon a clinical form of spastic diplegia to which they give the distinctive name of Little's disease, after the London surgeon who among the first called specific attention to this class of disorders. As these cases referred to present certain definite characters and a more hopeful future than the others, they merit separate mention.

The initial condition is a premature birth or the birth at term of a markedly undeveloped child. This means a defective pyramidal tract in the spinal cord and brain. Such children usually weigh less than four pounds. Spasticity results in the territory of the lower neuron from the lack of control due to the undeveloped condition of the upper neuron. These children are rigid from birth, but the mental qualities are not necessarily diminished, and if they survive, the tendency is to continuous improvement as the pyramidal tracts develop. This development is never complete, but continues up to the age of full growth. The motor condition is one of pure spasticity and there is no tendency to athetoid movements or epileptic attacks. The gait remains more or less spastic through life, which may be a long one marked by ordinary or even brilliant mental activity.

From Little's "Deformities of the Human Frame." Pages 115-16-17-18—1853.

The next is a severe case of spastic rigidity

of limbs, with impaired intellectual development, from asphyxia neonatorum, with the particulars of which I was furnished by the parent, a surgeon in Oxfordshire.

The male child of young and healthy parents, in consequence of protracted labor (it being the first child), was born asphyxiated, and continued so for above half an hour. The pressure, not instrumental, over the occiput, was to such an extent as to cause congestion and ultimately sloughing over the occipital protuberance. For several days the child was very feebie, and unable to cry aloud; during the first two days he had several convulsions, and did not appear likely to survive. However, after the bowels had been well cleared by an enema, he rallied, and was pretty well, although small in size. The only thing remarkable at this time was an awkwardness in taking the breast, so that during the first fortnight he was obliged to be fed from a bottle. At the age of two months he began to increase in size, and up to end of first year was remarkable for robustness. When nursing him, it was noticed that he did not retain his seat, but slipped off the hand or knee of the nurse. The period of dentition passed over without any disagreeable symptoms. His temper was always good. He appeared rather backward in the use of his legs, but this was attributed to his great weight.

At two years of age the attention of the parents was drawn to his inability to walk or creep on the floor, as also to his backwardness in the use of the tongue and right hand. He was now put under the influence of electro-magnetism three times a week, of sufficient strength to be disagreeable to an adult; and during the summer was dipped in cold water every morning. He was once during this year subjected to a course of calomel for a period of three weeks, which induced jaundice, and made him much thinner. His bowels after this were continually costive, but he took very little medicine. He occasionally awoke in the night apparently frightened, and was a considerable time getting quiet again.

Cerebral Spastic Diplegia.

Soon after his third birthday he could say "papa," imitate the cow, and knew several letters of the alphabet; and in the early part of the year could raise himself on his knees to crawl, which was performed principally by the left leg. He could also distinguish several of the animals in a Noah's ark, and in an effort to do anything difficult, a spasmodic twitching of the flexors of right leg was observed, which was increased when he attempted to use it. He sat chiefly on left nates.

During the fourth year he was able, when the weight of the body was supported, to advance his legs regularly for progression. When on his knees he is apt to change position by throwing himself back, and sitting with the legs under him to play with his toys. During this year he was taken to Brighton and bathed in the sea daily for six weeks. On his return his father perceived a great change for the better; there was greater animation, and the child was able to articulate the name of the bathing-woman. The mental powers began slowly to improve. About this time he was put under a course of steel medicine, which improved his health, and enabled him to use his legs more for support.

At the commencement of his fifth year he was put under a course of sulphate of zinc, beginning with gr. j. and gradually increasing to gr. v. He had a boot with an iron attached outside to prevent a contraction of right foot, and a baby-jumper for exercise. He continued to improve up to his fifth birthday, when he was able to walk slowly round the table, depending very much for support upon his hands, more particularly upon the left. He also pushes a chair before him, and can ride a rocking-horse without assistance. He uses his right hand better, can set up some of his toys, and also can feed himself with it. On taking up a ball, he can now, when he attempts to throw it, relax his hold of it. He begins to connect his words, and says many of them distinctly; he can pronounce each letter of the alphabet, and knows the majority of them. He can also count up to 40, repeat the Lord's prayer, and a verse or two of hymns, with but little assistance. He sleeps well and eats heartily. His body is in good condition and well formed, and there is no malformation about the spine or limbs. During the last twelve months he has been rapidly improving.

July 29, 1851. The author's journal states he is now between five and six years of age, a favorable instance of this severe class of case. The right side is most affected. Although he walks in the matter of T. equinus, the feet can be flexed with the hand. The left hand appears little affected, in the right pronation preponderates over supination; the flexors are less troublesome than pronators. The father's report, December, 1852, is "that he has mentally much improved; writes with right hand on a slate tolerably well; but being obliged to use so much force (to overcome the spasm), he does not do so well on paper."

Diplegic Form.—Both sexes are alike affected and the peculiarity is noticed as a rule during the first year and can usually be traced from birth; alcoholism has been a big factor when associated with tuberculosis and defective heredity. Many have a microcephalic cranium with small cephalic index. In the cases noted 40 per cent. had a form of strabismus. In the facial group of muscles frequently twitching is noticed more so on one side than the other. There is a weakened muscular tone of both extremities, especially the lower. The movements of the hand and fingers are clumsy, things reached for are often knocked over and in many cases a beautiful play of athetoid movements is shown in the limb reaching for an object as well as in those which should be at rest. Usually associated with athetosis of the fingers and toes there is a hyperextensibility; frequently one side is better developed than the other. More or less spasticity can be elicited in the upper extremities. At times marked choreiform movements are present.

In the lower extremities the spasticity as a rule is more marked, more often exaggerated on the one side and the feet frequently assume a form of talipes, most often talipes varus, and an adduction of the knees.

Articulation almost becomes a stammer due to spasticity. The special senses, hearing, smelling, tasting, feeling and seeing, remain in fairly good order.

There is very little change in the reaction to electric stimulation. The cutaneous sensibility shows little impairment unless the mental grade is so low as to influence it. No marked disturbance occurs in deep sensibility, such as tenderness over nerve trunks. There is more or less muscular incoordination.

Among the centrifugal apparatus there is noticed a frequent disturbance of the ocular muscles. Optic axis are often not parallel and myopia is a common finding, the pupils reacting to light and accommodation. One eye at times follows the light with full and steady movements. Frequently one naso-labial fold will show more tone than the other.

In testing the grip with a dynamometer one side often shows more weakness than the other corresponding with the finding in the extremity.

Speech shows at times the involvement of the tongue, lip and throat muscles.

The superficial reflexes, i. e., corneal, supra-orbital, epigastric and abdominal, are usually present and normal, and nearly always the plantar is present and normal.

The deep reflexes, i. e., biceps, triceps, supinator longus and patellar are exaggerated, sometimes more actively on one side than the other;

again at times the spasticity is so great and the parts held so rigidly that no reflex action could be elicited but later obtained under more favorable circumstances. Ankle clonus was very irregular.

Babinski sign showed no regularity; in some cases it is found in both feet; some in one foot, and again in some typical cases is not found at all.

walk and locomotion by means of a wheel chair is necessary. Some of the cases so deformed lie on their back in bed, legs crossed and with hands and fingers performing bizarre movements; also with their head, in fact any part of the upper extremity. Flipping thread, saliva and lint spinning is a frequent employment and apparent enjoyment. Automatisms are common. When standing the feet tend to spread and a

Hydrocephalus.

All the cases from which this abstract was made were able to swallow well, some were fed, but the feeding was made necessary because of the low mental state.

A careful Simon-Binet examination was made of the mental intelligence in all cases and it varied from a low grade idiot, having an intelligence of less than one year, to a high grade moron, having a mental intelligence of eleven years.

The spasticity may be so marked in the lower extremities as to incapacitate the individual to

knock-knee formation is seen. The body balance is poor. The skin is usually soft and sweaty. A peripheral cyanosis is frequently noted.

In about 10 per cent. of the cases there was associated epilepsy.

Mary M. Father, lather. At the age of 31 he was killed by a street car. Mother was a dipsomaniac. A brother of the father committed suicide and another one was tuberculous. Mother's father died of tuberculosis. Mother's mother died of a cancer.

This child was admitted October 31, 1904. She was first in the order of birth, being weak and ill-

nourished; weighed three pounds at birth. She did not walk until three years of age.

Skull measurements:

	Cm.
Head circumference	49.5
Naso-occipital arc	37.9
Naso-bregmatic arc	10.1
Bregmato-lambdoid arc	15.9
Binaural arc	27.5
Antero-posterior dia.	17.2
Greatest transverse dia.	13.9
Binauricular dia.	13.5
Cephalic index	.80

The head is microcephalic. Forehead is slightly retreating. There is more freedom of the facial muscles on the right side than on the left. In expresing emotion or in talking the left side of the face moves more freely and earlier than does the right side.

Eyes. There is an alternating divergent strabismus present.

Ears. Left ear is larger than the right. Lobules are adherent.

Upper limbs. This child is right handed. The right arm is smaller in girth and somewhat weaker than the left.

Measurements:

	Inches.
Circumference of right arm	7.5
Circumference of left arm	8.
Circumference of right forearm	7.5
Circumference of left forearm	8.5

There is a marked athetosis of the fingers and fingers are hyperextensible and slightly clubbed.

Lower Limbs. While sitting the child holds her knees close together and the feet are extended with the heels raised and the toes touching the floor in the position of talipes equino varus. When she stands squarely on both feet, both feet show a marked pes planus. She stands with knees adducted. The right leg is slightly larger and better developed than is the left. The right calf measures 11.5 inches; the left calf 10.75 inches. This contrasts with the development of the upper extremities, where the left arm is larger and stronger than the right.

This child is under-developed and stands markedly stooped, leaning somewhat to the right side. She stands with her knees close together and feet planted squarely on the floor. There is a slight left lateral curvature of the spine.

Gait is very spastic, almost a shuffling run. When asked how she feels, replies, "All right."

Breathing becomes spasmodic on exertion or excitement. Her mouth is nearly always open. This may be due to paralysis of the facial muscles.

Heart. Negative.

Nervous System. Smell: Camphor is recognized, etc. Vision: Practically good. Hearing: Good by rough tests.

Cutaneous Sensibility. Touch and pain sensibility are O. K. Localization of touch is good. Temperature and stereognostic sensibility are fair.

Deep Sensibility. There is no tenderness of nerve trunks. Muscular coordination is poor.

Eyes. Pupils are regular; they react sluggishly to light and accommodation. The optic axes are not parallel. One eye at a time follows the light with full, steady movements. One eye seems to be used about as easily as is the other.

The left naso-labial fold is slightly more marked than is the right.

Voice is loud and harsh. The speech defect is probably almost entirely due to the paralysis of the tongue, lips and throat.

The grip of the right hand is weaker than the left. The hands show a jerky tremor. There is athetosis present in both hands, feet and face.

All deep reflexes are exaggerated, more so on right side.

Superficial reflexes are present.

She passed 28 tests of 55 required. Intelligence 6 plus. Retardation 19. High grade imbecile.

Byron W. Father is a hotel clerk. Mother is a tubercular. One sister, more helpless than this child, died at 3 years of age.

Child was admitted April 23, 1902. He was born normally and at full term in 1895. He was second born. He is cross-eyed.

Child is emaciated, practically no muscular development. Bones are easily palpated and outlined. The child's head is elongated vertically. Eyes are open and staring. There is a tendency to protrusion of lower maxilla. Child lies in a position of general flexion with either one hand or the other in its mouth the majority of the time.

Eyes show a nystagmus and an internal strabismus of the left side. Corneal reflex present. Ears are large and protrude. Teeth are poor and decayed—irregular. Palate is high. Face is expressionless. Thyroid is atrophied.

Chest presents a frustrum appearance. The lower ribs flare very markedly. General emphysema. The abdomen is distended. Pubic hair is absent.

There is a tendency to flexion of the forearms on the arms with adduction of the arms on the chest, held more or less rigid and are spastic with athetosis of the fingers, more so on the left side.

There is flexion of the legs on the thigh with abduction of the foot with marked flat-foot present. The parts are very rigid and spastic. Gait is spastic. There is peripheral cyanosis.

Vision is apparently present but nothing definite can be obtained in regard to what extent. Hearing is present but degree and acuteness is difficult to determine. Phonation and articulation is defective.

Cutaneous sensibility is present. Superficial reflexes—corneal, supraorbital, epigastric, abdominal and plantar—are present. Deep reflexes—biceps, triceps, supinator longus and patellar—are exaggerated on left side.

The movements of the facial muscles are impaired. There is a marked tremor of the eyelids. There are automatic bizarre movements of the head, arm, hands and fingers. The muscular tone of the lower extremities is poor.

He has been an inmate for 11 years. He spends practically all of his time sitting in a chair, performing automatic movements, scratches the skin of his hands and face until it bleeds at times, becomes excited and is noisy and restless.

The muscular growth has been poor. He is very untidy and has to be fed. When he does not spend his time in his chair he usually is in his bed and is quite destructive to his clothing and bedding.

Diagnosis: Infantile cerebral palsy. Spastic diplegia type.

Binet: He passed 4 tests of the 55 expected at his age. His intelligence is approximately at the level of one year plus, indicating a retardation of 16 years plus. Ranks as a middle grade idiot.

His speech is absent entirely—no understanding, no words, grunts and laughs.

Hydrocephalus.—This condition is observed macroscopically by the unusual size of the cranium which attracts attention. This is caused by extreme dilatation of the ventricles, the brain tissue thereby being reduced to a mere wall surrounding the cavity containing an accumulation of serum. This condition results from a previous injury or disease producing an accumulation of fluid in the lateral ventricles in excess of what can be cared for, producing an internal hydrocephalus. It has been frequently associated with rickets. The fluid appears to be secreted by the ependyma of the lateral ventricles and may vary in amount from a few ounces to five or six pints. It is identical with the cerebrospinal fluid. The distention of the brain causes a distention of the skull before bony union and formation is complete and this produces, as was before mentioned, macroscopic appearance of a hydrocephalic skull.

In the 14 cases which are part of the 118 cases of infantile cerebral palsy there were 9 males and 5 females. Two of the females had associated epilepsy and five of the males were similarly affected.

Freda K. was admitted May 13, 1902. She was second born; delivery normal. Peculiarity was first noticed at six months of age—large head. She had convulsions.

Weight 136 pounds. Stretch of arms 157 cm.

	Cm.
Circumference of skull	60.5
Naso-occipital arc	35.5
Naso-bregmatic arc	14.
Bregmatic-lambdoid arc	13.
Binauricular arc	36.5
Occipito-frontal diameter	19.5
Binauricular diameter	15.6
Greatest transverse diameter	18.1
Cephalic index	.93

Head is macrocephalic; dome shape; bulges more on the left side. Right side of face is larger. Alternating divergent strabismus. Tongue protrudes slightly to the left. Breast—large and pendulous.

In the upper extremities there is a tremor of both hands; also a stiffness and awkwardness of the fingers with hyperextensibility. Peripheral cyanosis is present.

Hydrocephalus with Paraplegia.

She sits quietly all day in an invalid chair. Is unable to dress or undress; is untidy.

Lower extremity. Both patellae are drawn above the normal position. She sits in a stooped position for hours in an invalid chair, unable to walk, but can move about a little on her knees. She says "I feel all right."

The cutaneous sensibility is hypersensitive. Right side of face moves more freely than left.

The superficial reflexes, that is the corneal, supraorbital, epigastric and abdominal, as well as the plantar, are present and normal. The deep reflexes, bi-

ceps, triceps and supinator longus and patellar are exaggerated. Marked spasticity of both legs is easily demonstrated

She passed 16 of the 60 required tests, indicating an intelligence of 4 years and a retardation of 21 years and would grade, acording to this intelligence scale, as a low grade imbecile.

Willie H. was admitted August 8, 1901. He is now 31 years old. He was first born of four children. His twin brother died about three days of age. The child is said to have been peculiar from birth; head large; legs drawn up; spine curved. He was able to feed himself, tie a shoestring; bright, cheerful and interested in play. The assigned cause was lues, causing a dropsy of the brain. He plays the zither.

The grandfather and mother and one brother had consumption. Father was alcoholic.

The child could not hold its head up until the second year.

	Cm.
Circumference of head	66.25
Naso-occipital arc	37.5
Naso-bregmatic arc	16
Bregmatic-lambdoid arc	15.5
Binauricular arc	38.1
Antero-posterior diameter	23.75
Binauricular diameter	16
Greatest transverse diameter	17.5
Occipito-mental diameter	28.75
Cephalic index	.737

Teeth are wide apart. There is exophthalmos and divergent strabismus. Ears are large, left more so than right.

Lower limbs are contracted; knees adducted, feet abducted; talipes valgus; marked contracture of ham string muscles.

This child sits in a wheel chair, frequently cross-legged; he is unable to walk. Genitalia are atrophied. There is a right scoliosis in the dorsal region and kyphosis. Very recently a grand-mal epileptic seizure was had.

There is a marked dyspnea due to the deformity of the chest. There is a general weakness in the muscular tone.

The cutaneous sensibility is good. There was no especial tenderness of the muscles or nerve trunks to pressure. With the dynamometer, according to Smedly's instrument, right shows 34 kilos, left 33.

There is a marked spasticity in the lowers and muscular weakness in the uppers; there is athetosis and clumsiness of the fingers. A general tremor, almost choreic, is present.

He is a good conversationalist, is neat, cheerful and is anxious to be quizzed.

According to the Binet-Simon test he graded as a high grade moron.

Regarding the other twelve cases will say that in each case the ocular apparatus showed involvement, usually an alternating divergent strabismus. A very common finding is a pes planus, talipes valgus and talipes equinus. Over half of them were unable to walk and spend most of their time in wheel chairs suffering with marked paraplegic symptoms where the knees were adducted and the feet abducted.

The reflexes were more exaggerated on one side than the other, but the deep reflexes could almost always be found exaggerated while the cutaneous sensibility remained unimpaired.

In regard to the anthropometric data will say that the occipito-frontal circumference varied from 57 to 67 cm. and the cephalic index from .73 to .920.

The mental intelligence, according to the Binet-Simon scale ranged from a low grade imbecile to a high-grade moron.

The greatest predominant factor in the etiology was an alcoholic and tubercular history of the parents. Difficult or instrumental labor played a small part only.

As a rule the lower extremities were more involved than the upper, in fact one boy was able to play with considerable ease a zither.

The general body tone is relaxed. In the male the skin was loose and in the female there was a general flabbiness.

In three other cases there was a marked paraplegia. The patellæ were drawn above their normal position and a talipes of one form or another deformed the feet. In trying to stand there was usually a buck-knee present.

Hemiplegia.—The hemiplegic form of cerebral palsy affords an interesting group for study as an opportunity presents for relative comparisons and as a rule the evidence is so conspicuous as to be readily recognized even to the extent of causing marked deformity of the affected side, showing the characteristic features of hemiplegia as seen in adults. If developed in infancy it most commonly is ushered in by convulsions. The onset is followed by a period of unconsciousness of varying duration.

Frequently death occurs during this period. If they survive the onset a paralysis is noted which tends to some improvement, especially the lower limb, then a stationary state is arrived at and as the child develops a corresponding apathy or undevelopment of the affected side becomes more noticeable. The patient soon learns to do varied movements by the assistance of the sound side. The paralysis can be easily traced along

the whole side affected and as time goes on contractures of the various tendons cause deformities of the sides, especially noticeable in the hand and foot, forming a talipomanus of the hand and a talipes equino varus of the foot. The girth of the muscles is lessened, the length of the affected bones are shortened and a dwarfed or atrophic condition of the affected part results.

The nerve tone and blood supply to the affected side is impaired, a cyanosis and thin skin, rather pale and bluish is seen. The electrical reactions show no change on affected side.

The superficial reflexes are usually present and normal, while the deep reflexes are exaggerated, more pronouncedly so on the affected side, especially the patellar; the upper and lower limbs show clumsiness and spasticity.

Their mental attitude is a restless, irritable one much like that of an epileptic. The good side is called on to help the affected side. After the stationary stage has been arrived at very little is hoped for in the line of treatment.

Strumpel says "the whole course of the disease suggests very strongly an acute encephalitis."

Sachs and Osler, from the study of a large number of cases, find that the cause of the paralysis is almost always hemorrhage or embolic softening.

In the hemiplegic cases the arm usually recovers less than the leg or face and the athetoid condition is commonly confined to it.

Laura R. was admitted October 16, 1905. Age 15; born in U. S.; single; condition dates from early childhood; first noticed in second year; after a severe attack of otitis media a defect was noticed on the left side of the body. This child was third born and the second living child. Labor was normal; weight at birth 8 pounds. She had a convulsion at the time of the otitis media; also tuberculous glands of the neck at that time.

Father is living; aged 42. Mother died of heart disease; aged 33. At the fourth month of gestation the mother received a severe fright. One brother died the day after his birth; one sister still born; another died an hour after birth; one sister living—fifth born.

At three years of age she had chorea; at four epileptiform convulsions. In the seven years' stay at the institution one epileptic convulsion has been recorded of a grand-mal type.

Height 153.6 cm. Weight 117.5 lbs.

Skull measurements:

	Cm.
Skull circumference	52.7
Naso-occipital arc	29.8
Naso-bregmatic arc	12
Bregmatic-lambdoid arc	12.7
Binauricular arc	27.3
Antero-posterior diameter	17.1
Greatest transverse diameter	16.5
Binauricular diameter	16.1
Cephalic index	.96

Head is brachycephalic type, left side smaller, but the muscles of the right side move more freely. The lips are normal. Teeth, second dentition. Soft palate is normal; hard palate is broad.

The tongue is small, pointed, and has a few small transverse fissures. The left side of the tongue is

Cerebral Spastic Diplegia.

smaller than the right and has a somewhat shrunken appearance, suggesting atrophy. Thyroid is small.

Thorax. The left side of chest is much less developed than the right.

Upper limbs. The left arm is deformed and weaker than the right. The left side is spastic, the hand carried flexed on the wrist-talipomanus. The forearm extended on the arm. There is athetosis of the left hand and the fingers are hyperextensible.

Measurements of the arms:

	Inches.
Circumference of right arm	9.75
Circumference of right forearm	9.5
Circumference of left arm	9.
Circumference of left forearm	8.25

The right hand is well formed, the fingers short and stubby.

Lower limbs. The left foot shows a talipes valgus deformity. Both legs show weakness.

Measurements:

	Inches.
Circumference of right thigh	18.25
Circumference of right calf	13.
Circumference of left thigh	17.5
Circumference of left calf	12.25

There is a general leaning to the left side. There is a right scoliosis and a thoracic kyposi present.

The gait is peculiar. The left leg swings from hip after the manner of hemiplegia, but the right leg is apparently weak, the foot dragged forward and seldom lifted from floor.

General appearance. General nutrition is good. When asked how she feels replies, "All right."

Chest expands fairly well, better on the right than on the left side.

Ocular Group. The optic axes are not parallel. There is no nystagmus.

The muscles of expression, both the upper and the lower groups, appear to act better on the left than on the right side.

Articulation is poor, being largely of the type of infantile stammer.

There are many small choreiform movements involving both extremities on the left side, but not affecting the right side except for an insignificant tremor of the right hand. There is athetosis present in both extremities on the left side.

Reflexes. Superficial reflexes are present and normal. Plantar reflex is absent on the left side. Deep reflexes are present and exaggerated, more so on the left side.

This girl has an epileptic suggestion, violent at times. She is idle. She controls choreiform and contracture movements by grabbing her left arm with her right hand. Her right leg holds left leg in check.

She helps to dress and undress herself and is tidy in her personal habits.

Diagnosis. Infantile cerebral palsy. Left hemiplegic with some weakness on right side.

She passed 26 tests of 50 required. Intelligence of 6 years. Retardation 8. Ranks as a high grade imbecile.

Max X. was admitted February 11, 1907. His father is a woodturner; age 32. Mother, age 29.

Child was first born; labor normal. At the age of one year he had meningitis with convulsions and on the third day of the disease got paralysis on the right side. It was supposed at the time that he was infected through vaccination. He had convulsions twice a year until 1906.

Height 62.5 inches; weight 117 lbs.; stretch of arms 59.75 inches.

	Cm.
Circumference of skull	51.2
Naso-occipital arc	31
Naso-bregmatic arc	11.9
Bregmatic-lambdoid arc	12.4
Binauricular arc	39.5
Antero-posterior diameter	16.2
Greatest transverse diameter	14.7
Binauricular diameter	14.3
Cephalic index	.90

Face is prognathous. The features are coarse. The right naso-labial fold is more pronounced. He has internal strabismus; tongue protrudes to the left. The left shoulder girdle is larger than the right, the left clavicle is one inch longer. The left scapula is larger.

Upper limbs. The right arm is moderately flexed at the elbow, shows marked retardation of development and impaired function.

Right arm .....22.5 inches long
Left arm .....26.25 inches long

Circumference of the right arm and forearm about one inch less than left arm.

Lower limbs. The right leg is 1.75 inches shorter than the left.

Thigh: Circumference of right 16.5 inches, of left, 17.5 inches.

Calf: Circumference of right, 11.25 inches, of left, 12.5 inches.

Lower group of facial muscles do not move as well on the left side as on the right.

The general musculature on left side is quite good. The right side of the body is in a state of spastic paralysis. The dynamometer showed the grip to be 25 kilos in the left hand and 2 kilos in the right. The fingers of the right hand can be hyperextended. The gait is that of a hemiplegic. Electrical reaction not affected.

Babinski sign is present in the right foot.

Superficial reflexes are present and normal.

Deep reflexes are exaggerated; more so on the right side. He is tidy, has a strong, violent temper and is easily disturbed.

In a resume of 25 cases, the conditions found were as follows: 9 male.

Hempilegics: Right side 5; left side 4; athetosis 6; talipes 7; talipomanus 6.

Order of birth: 4 second born; 4 first born; 1 no record.

Onset: convulsions 8; strabismus 5; heredity 5; epilepsy 6; normal labor 5.

Intelligence:	Real Age	Mental Age
	19	10
	13	5
	12	8

1 Middle grade imbecile; 1 middle grade moron; 1 low grade moron; 1 moron; 5 no tests made.

Female 16; hemiplegics, right side, 11; left

side 5; athetosis 13; talipes 13; talipomanus 12.

Order of birth: 4 first born; 2 second born; 3 third born; 1 fourth born; 2 fifth born; 2 ninth born. 2 no record.

Onset: convulsions 13; strabismus 7; heredity 9; epilepsy 12; normal labor 12; abnormal labor 1; no record 3.

Intelligence:	Real Age	Mental Age
	19	1
	18	5
	15	7
	15	2
	36	6
	30	7
	14	3
	15	2
	14	6
	15	5
	30	5
	23	1
	25	6
	25	3

Six middle grade imbeciles; four low grade morons; two high grade idiots; two low grade idiots; two no record.

Paraplegia, as the name implies, is a paralysis of the lower extremity of an infantile cerebral variety. This condition is more rare than the other forms of cerebral palsies although with the hydrocephalic form a paraplegia is frequently associated.

The symptoms are very similar to those of a spastic cerebral diplegia with the exception that there is little or no demonstrable involvement of the upper extremity, while the lowers may be affected in degree from a spasticity shown in the muscle tone and the spastic gait to a complete loss of function, making ambulation impossible and confinement in bed or movement by wheel chair necessary. The intellect is less impaired and the genitalia remain juvenile. There is marked contrast in some cases between the body above the hip and below the hip and atrophic state is noted. The limbs are usually closely adducted, the knees touching while the feet tend to abduct and form one of the talipes. The limbs are held quite rigid and there is a marked exaggerated knee reflexes.

The fingers, hands and arms of the upper extremities may perform very delicate movements. The condition does not improve physically nor is there a progressive mental growth, consequently this condition should not be confused with "Little's Disease," in which there is a steady physical and mental improvement. Of the 118 cases examined only one was a paraplegic although in several hydrocephalics there was an associated paraplegia.

Nellie P. Born June 22, 1892. Admitted November 1, 1905.

Family History. Father died at 68 of some "nervous trouble." He also had tuberculosis. He was a

Left Hemiplegia.

drunkard before the birth of this child. The mother is an epileptic and has been an inmate of a state asylum. Father's father was a drunkard; the mother's father died of "consumption." Both father's and mother's families had cases of scrofula and consumption. The two first children of the family died two and ten hours after birth. The fourth child is living and reported well.

Personal History. This child was third born. The mother was particularly abused at second month of pregnancy. Peculiarity said to have dated from birth. Convulsions. At fourth month of age the child had a skin eruption. At third month of age she had brain fever. She began to talk at 4 years. She has had otitis media. She did good work in school.

Height 153.5 cm.; weight 115.5 lbs.; stretch of arms 157.3 cm.

Skull Measurements:

	Cm.
Head, circumference	55.2
Naso-occipital arc	30.4
Naso-bregmatic arc	13
Bregmato-lambdoid arc	12.4
Binauricular arc	31
Occipito-frontal diameter	19.2
Greatest transverse diameter	15
Binaural diameter	13.1
Cephalic index	.77

The head is symmetrically formed.

Face. Features are good. The right corner of the mouth is drawn down slightly. Lips are normal. Eyes are good. Ears are good; also tongue and thyroid.

The upper limbs are normally and symmetrically formed, strength is good. The fingers show hyperextensibility.

The lower limbs are stiff and spastic. Both feet show pes planus, which is more severe in the left foot. Skin is of good color.

The body is of normal size. Body balance is relaxed. There is a right lateral scoliosis present.

Gait is extremely spastic, both feet being dragged and the body being swung from side to side in walking.

When asked how she feels replies, "All right."

Her pulse is 80.

Special Senses. Smell: Asafetida is called "sassafras"; cinnamon is called "peppermint"; wintergreen she does not recognize; oil of peppermint is recognized. Pupils are negative. Vision is practically good. Taste: Sugar, salt, quinine and vinegar are all recognized and named. Hearing is slightly defective.

Cutaneous sensibility and deep sensibility are negative. Muscular coordination is fair.

Voice is smooth, articulation defective, suggesting infantile stammer. Deglutition is normal.

Reflexes. Superficial present and normal; deep reflexes are exaggerated.

This girl is well oriented as to time, place and person. She has a good memory of recent and remote events. She is trustworthy and an excellent worker. She makes beds and helps in storeroom. Is able to dress and undress and helps other children.

Diagnosis: Infantile cerebral palsy; paraplegic type.

Diagnosis.—The diagnosis of infantile cerebral palsy is comparatively simple if a careful study is made of the history of the family and particularly the mode of onset and the time of appearance of the symptoms. The great majority of the cases occur during the first year or the symptoms show themselves during that time. In the hydrocephalic form the dome-shaped cranium of abnormal size with usually a divergent strabismus and spasticity of greater or less degree with mental impairment and weakened lowers can hardly be mistaken for anything else. While the hemiplegic type associated with spasticity and the juvenile history of development are clear, the diplegias may take a longer time to clearly demonstrate as age advances, the athetosis, chorea, exaggerated deep reflexes and spasticity of both upper and lower extremities often more exaggerated on one side with more or less mental retardation presents a clear clinical picture.

These diplegias are not to be confused with Little's disease, which is an improvable form of cerebral insult where little or no mental deterioration remains and a steady improvement physically and mentally is the rule. The onset is usually a premature birth or a birth at term of a markedly undeveloped child.

Prognosis.—The different forms of the clinical picture of the cerebral insult are very prone to remain stationary as far as improvement is concerned. The greatest mortality is apt to occur when the initial convulsion introduces the clinical picture during the first year of infancy. From that time on until adult life the defect is brought more in contrast with the better growing, developing part and accentuates the finding.

The life of those who reach maturity is brought to a close by some intercurrent affection usually tuberculosis or a pneumonia or a status or exhaustion from epilepsy in those who are so afflicted.

Treatment.—Infantile cerebral palsies begin at birth or as soon as the earliest indications of cerebral involvement can be ascertained. Paralysis early may be so extensive as to prevent normal nursing and artificial feed may have to be resorted to; also the alimentary tract should be carefully studied; free and open catharsis is indicated. The food should be simple and nutritious as well as easily assimilated as the general nutrition tends to be poor. Early manipulation and massage of the bones, joint, muscles and other tissues will assist the circulatory apparatus in toning and innervating the various tissues. As time goes on the proper culture of speech and sense training is indicated. Walking is usually delayed and sometimes never becomes possible, perambulators and other walking devices are in

use. In the hydrocephalic trephining and tapping of ventricles has been attempted only to result in death or a refilling of the emptied cavity. In the hemiplegic form as well as the diplegic form tenotomy, transplantation of tendons and other surgical procedures have been resorted to in order to relieve the various contractions and reduce deformities; also orthopedic appliances of many kinds can be judiciously used with much good.

Many cases due to mental retardation and the expensiveness unavoidable in private care soon gravitate to larger and more charitable institutions.

In the cases associated with epiplepsy more care and safeguards must be placed about them in order to prevent the accidents and injuries so common to the epileptic. The spasms or convulsions which are usually of a grand mal type are reduced by hydrotherapy or drugs. The drugs used most often are chloral, bromides, morphin and chloroform.

6860 S. Halsted street.

FORTY YEARS' EXPERIENCE IN CONSTRUCTION AND ADMINISTRATION FOR THE INSANE IN THE MIDDLE WEST*

RICHARD DEWEY, M. D.
WAUWATOSA, WIS.

I will endeavor in my remarks to cover very briefly the period during which I have been actively engaged in the work of psychiatry. My first experience was early in 1872 as assistant physician in the State Hospital at Elgin, then newly opened.

It was noteworthy that at that time a large amount of agitation and discussion concerning the care and treatment of the insane was rife in this community and throughout the country. There had been, heretofore, a process of development of institutions for the insane upon very narrow and stereoptyped lines, speaking from an architectural standpoint. Practically the only type of institution known in those days was an institution built upon the linear or corridor, or so-called "Kirkbride" plan, following the lines largely of an ancient monastery. The institutions through the country varied in size, but all of them practically consisted of a central building with wings upon the right and left for the male and female patients, three, four, and in some cases five stories high, with central service buildings. The main central building was usually stately, ornate and palatial in style, as became the dignity of the state and befitted local pride, and these were the determining ideas rather than the needs of the unfortunate inmates. The whole arrangement was as little like the ordinary house and home as the cages of the zoological garden are like the native forest. This plan of construction, however, called the "congregate" or "Kirkbride" style, was an approved and orthodox thing and, like other established institutions, was considered the only correct and proper form in which an institution of the kind could be constructed. All classes of the insane, as well as epileptic, criminal, alcoholic and drug victims were here brought together in a rather indiscriminate manner.

On the other hand, the original thinkers and agitators for progress began to advocate more natural and homelike arrangements, and a battle of ideas was waged around this question of architectural construction, and many severe verbal assaults were made before any effect could be observed; but the advocates of the so-called "cottage-system" of "segregate" instead of "congregate" buildings of detached wards of house-like and home-like construction continued the attack and finally succeeded in Illinois in having an appropriation made for a new institution. The law creating this institution also provided for detached wards or so-called "cottages," and this was the beginning of the new departure inaugurated at Kankakee, where for 14 years, from 1879 to 1893, I was charged with the duty of directing the growth and development. This institution built upon the "village" plan prepared the way for breaking loose from the congregate or linear style of construction which had previously universally prevailed. And here I may quote from my first report the statement of the special aims that were striven for:

"First: How moderate the expense of erecting suitable buildings for the insane could be made.

"Second: Whether occupation which would be beneficial in every sense could be secured for a majority of the inmates.

*Read at a meeting of alienists and neurologists held under the auspices of the Chicago Medical Society, June 23-25, 1913.

"Third: To what extent the rigor of confinement and restraint could be removed, and a natural and somewhat domestic mode of life be introduced among our patients."

It may be well to recall the important factors operative in suggesting and preparing the minds of the people generally for this new departure. These may be briefly stated: First, the experience in foreign countries of the successful management of the insane in buildings of more ordinary construction or actually in the houses and homes of people who were willing to accept them as pensioners or boarders. The insane colony at Gheel, Belgium, where more than 2,000 insane patients were quartered as boarders in families of the peasantry; the colony at Alt. (Scherbitz), Germany, and various other institutions in France and Germany, where farm life and various other industries were successfully maintained, also the system of "boarding out" the insane in Scotland; a system also followed in Sweden, while in America a different style of constructon had in some sense been already inaugurated. At London, Canada, two or three detached wards had been built and occupied as an annex. There had been a large detached development in an extensive group of small detached asylums though still on the "linear" style of construction at the Willard, N. Y., institution for the chronic insane, the difference being in their detached situation. These buildings accommodated each four or five hundred and were erected at an expense, up to that time unprecedently small, of about $500 per capita. The newer ideas, which it was our task to introduce and give practical form to, were not only of domestic houselike or "cottage" construction, but of the erection of buildings at a more moderate and practicable expense. Institutions for the insane had continued to multiply, but it had become more and more evident that the numbers of insane were rapidly outstripping the means provided for their care. Indeed, a wave of extravagance swept over the country, which in the end raised some prejudice against the state institutions and the palatial style of construction. Two institutions were built in New York state which cost in construction between $3,000 and $4,000 for each individual that could be accommodated in them. The same extravagance appeared in Massachusetts. In the Danvers institute it was stated the stately center building contained a spacious banquet hall for the officers. Similar extravagance was reported in New York and other states. It was also seen that no state could afford to spend for each insane inhabitant a sum that would buy a farm or a better house and lot than the average citizen could afford to live in.

The departure in style of construction at Kankakee was followed quite promptly by other innnovations in the middle western states for, while the impetus had perhaps come from the east and especially from Willard, it was in the middle west, namely in Illinois, Indiana and Ohio that the first institutions of pronounced detached or "cottage" form of construction were erected.

Gradually but steadily variety in construction was introduced and the steps by which freedom in plan was obtained are indicated by the following instances in their chronological order; the states which successively up to the year 1890 established institutions on the "cottage" or detached ward plan:

Illinois, at Kankakee, opened December, 1880, three detached wards for 100 patients. In 1890 there were at Kankakee 1,350 patients in detached wards out of a total of 1,675.

Ohio, at Toledo, opened a state hospital wholly on the cottage plan in January, 1888. There were 1,097 inmates all in "cottages" in 1890 at this institution.

Indiana, at Logansport, provided in July, 1888, for 380 patients "village plan"; and at Richmond in July, 1890, for 400 patients in detached cottages.

North Dakota, at Jamestown, opened in April, 1885, provided for 160 patients, all buildings detached.

New York, at Ogdensburg, opened in the fall of 1890, for 300 patients in detached blocks; capacity later reached 1,500 patients.

Ontario, Canada, at Toronto, 1890, 240 patients in detached wards.

New York City, Central Islip, L. I., opened May, 1889, 360 patients.

The cost of construction per capita in all the above instances varied between $400 and $500 per capita.

The process of differentiation in construction as thus illustrated was continued until today it

seems curious that any one stereotyped system should ever have been insisted upon, as the utmost variety prevails in all the newer institutions. Of equal importance with variation in construction, and going hand in hand with it, is the differentiation of the insane into groups, each requiring different treatment and environment from the other. These groups or classes of patients can, in some cases, be separated within the same institution or building; others require entire separation in location and administration.

More than a quarter of a century ago I had the honor of advocating before the Association of Superintendents the entire separation of epileptic, alcoholic and criminally insane patients from the general mass of the insane, and of showing why each class required separate provision. Others had previously advanced the same plea, and the principles involved in such separation have now come to be universally recognized, although alas! only partially acted upon in practice. Nearly all the more progressive states, however, today have at least made a beginning. It is nowhere denied that the epileptic should be cared for in institutions of their own, and several epileptic colonies are doing valuable service. The insane convicts have been separated to a great extent from the insane who are innocent of crime, and separate provision for victims of alcohol has been made in many states, though material realization of these needs still halts far behind theoretical recognition of them.

Finally the most important change of all, itself an essential element in the "newer ideas of construction," the "psychopathic hospital" and the "psychiatric clinic," are at last realized. Separate detached wards for the acute, curable and convalescent cases began to be provided at once as a part of the new movement and *pari pasu* with the development of the modern hospital with its attendant system of laboratories, the treatment of the acute insane has grown and expanded in manifold measure. One of the earliest steps taken was the addition of the "ward for nervous and insane cases," at the Albany, N. Y., hospital under the leadership of Dr. J. M. Mosher, and our large cities have provided for the insane in their detention and emergency pavilions and wards, until such provision is now recognized as essential. If further evidence is needed of the newer and better day for the sufferers from nervous and mental maladies, we have only to look at the state psychopathic institute already in operation in Illinois at Kankakee and at the psychiatric clinics recently inaugurated at Boston and Baltimore, the former by the city of Boston, the latter by the munificence of Mr. Phipps.

THE NEED OF A PLAN TO ELIMINATE THE MENTALLY UNFIT FROM SERVICE IN TRANSPORTATION COMPANIES*

THEODORE DILLER, M. D.

PITTSBURGH, PA.

Associate Professor of Neurology, University of Pittsburgh; Physician to Psychopathic Department of St. Francis Hospital; Neurologist to the Allegheny General Hospital.

For nine months past I have been serving as consulting neurologist to a large railroad company; and during this short period I have been called upon to examine five employes of the railroad, four of whom were found to be suffering from paretic dementia. Two of these men were engineers, one a fireman and the fourth a switchman. Another man suffered from a type of confusional insanity, perhaps dependent upon arteriosclerosis. In the case of the switchman, this man was on duty at the time I examined him. His case was one of the quiet dementing type of paresis and the progress had been slow. The clinical examination and laboratory tests left no room for doubt as to the diagnosis. The cases of the engineers and the firemen were all well developed when I saw them and at the time they were all off duty. It must be supposed, however, that all of them, for shorter or longer periods of time, were on duty while suffering from paresis; nor could one think of any plan by which it would be possible to eliminate from railroad service cases of paretic dementia at its very beginning.

This experience has set me to thinking over this whole subject; and the very natural thought comes to my mind that the railroad employes who become mentally disabled either by reason of paretic dementia, arteriosclerosis, cerebral syphilis or any other cause should be eliminated from the service as promptly as possible.

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*Read before the Association of Baltimore and Ohio Surgeons at Pittsburgh and at a meeting of alienists and neurologists held under the auspices of the Chicago Medical Society, June 23-25, 1913.

Attention has already been called to this subject by Knapp[1] and Dunton.[2] Knapp states that five out of fifty men suffering from paresis seen in the out-patient department for nervous diseases at the Boston City Hospital were employes of transportation companies; and he learned that out of 263 general paralytics in various insane hospitals of Massachusetts, nine were railroad employes; and he shows further "that general paralysis, or other chronic diseases of the brain attended with mental disturbances, was not infrequently found in railroad employes rendering them less reliable and less accidents may, and probably have, arisen by reason of the existence of mental disease in employees rendering them less reliable and less competent. He says truly: "These diseases, as we know, are of insidious onset, and the family often think at first that they are of trifling consequence. The patient feels unable to give up his work and the attendant physician fails to recognize the real gravity of the trouble long after it is evident to the skilled neurologist."

In similar way Dunton argues the same question. In one case mentioned by Dunton an employe suffering from epilepsy declined to give up his position although advised to do so. In this case Dunton felt that the proper course was to inform the railroad company and to disregard the old oath of professional secrecy. I may state here that I have had one case exactly similar to this. A railroad fireman suffering from epilepsy consulted me. I advised him in the strongest terms to give up his position; when he demurred about doing so I warned him if he did not I would feel called upon to make a voluntary statement to the company regarding his condition, and to warn them of the danger which might occur by reason of his continuance in their employment.

These conditions at once suggested the need of systematic examinations of railroad and other transportation employes to determine their mental integrity and especially such employes as are engaged in transportation. It is now well recognized in railroad circles that it is absolutely necessary that signals to be conveyed to the eye and ear must be understood and acted upon; and hence tests for sight and hearing of employes are made regularly and systematically. It is very well understood that there may be, as regards the mind, a slow, insidious involvement such as we see in paresis, cerebral syphilis, arteriosclerosis, etc., which may escape the attention of the ordinary observer and indeed of the railroad surgeon. So it appears to me that railroad companies should take up this question for very practical consideration and set in operation some scheme by which the mental integrity of all employes engaged in transportation should be inquired into systematically from time to time by a medical man, who has had training in mental diseases. Such an examiner could doubtless be materially assisted by some practical railroad man in giving tests which would constitute a practical examination to supplement that of the physician.

I am making this recommendation in the hope that it may be taken up in some practical form for consideration by this body. That the Relief Department of the Baltimore & Ohio Railroad is alive to the question which I am raising in my paper may be seen by the following quotation from a letter written to me by Dr. S. R. Barr, superintendent of the Relief Department.

The relief department has time and again reported as unfit for railroad service employes afflicted with nervous and other disorders. Invariably our recommendations have been carried out and the persons so reported removed from the service entirely or provided with work which they were able to perform without endangering their own or the lives of others. However, we have not secured authority to make periodical examinations of employes, many of whom have been in the service many years, except as to sight, hearing and color sense. I am fully aware that it is desirable to have engineers and firemen, especially, undergo physical examination every two or three years, for instance, and I hope yet to succeed in convincing our superiors of its importance.

It is our present practice to make sure that every man is fit for his work after severe illnesses, but that is the only condition under which we are in position to acquire information of this character. At this time I know of quite a number of men in the entire service who are not permitted to work by reason of mental trouble, nervous or heart disease and other ailments. If any such are at work we know nothing of it.

It is plain then that the Relief Department of the Baltimore & Ohio Railroad is doing all it can under the present authority to eliminate

1. In a paper read at a meeting of the Boston Society of Psychiatry and Neurology, January 17, 1907.
2. Paper read before the American Medical Association, June 26, 1909.

from its service the mentally unfit. And we must all hope that the time will very soon come when engineers, firemen and switchmen shall be required from time to time to undergo an examination to determine the question of their fitness, both from a mental and physical point of view, to continue at their occupation. If this is brought about it will work some hardship on the part of the men. But the question as to whether or not the mentally unfit should be allowed to continue in transportation service of railroads cannot admit of any discussion.

DISCUSSION.

Dr. A. E. Sterne, Indianapolis, Ind.: *Mr. Chairman*; This is a subject of great interest. We have all of us seen examples of disaster which have arisen from causes such as have been spoken of and others which have been merely indicated by the words of Dr. Diller.

Last week Dr. Camp of Ann Arbor brought up this subject in the Neurological Section of the American Medical Association, and a set of resolutions was adopted looking toward the recommendation to the standing committee, I think, of the American Medical Association, so that this committee could communicate with the officers of the railroads, in order to prevent just such contingencies from arising.

In reference to what Dr. Diller says, I should append thereto the malady which we speak of as epilepsy most insistently. I think epilepsy probably more than any other disease offers a serious danger when it occurs, and notably when it larvally occurs. (that is the serious point) in individuals who occupy important positions in transportation companies.

In beginning paresis it is very difficult to determine oftentimes just the exact status of the individual, and Dr. Diller has suggested a way—and the only way, I should say—in which it is possible to prevent conditions of this kind, namely, frequent and repeated examinations, and thorough examinations of these men—not simply superficial ones, but careful examinations. It is a notable fact that engineers not infrequently suffer from tinnitus aurium, but as long as they remain in good health they can control these sounds pretty well, and relegate the auditory impression to its proper sphere. When, however, anything happens to these individuals which reduces the physical coefficient and thereby reduces their ability to determine exactly the nature of the sounds they hear, they are prone to be beset by various fallacious ideas which originate from conditions that have been present, but controlled, for many, many years. I have seen several such cases, and in two instances, based upon actual ear trouble, typical paranoid complexes developed.

Those of you who live in or near Chicago will recall just a few years ago a very serious wreck that occurred somewhere between 53rd and 54th streets, due to the tower man at that station, who suddenly became obsessed with the idea of harm coming to him through agencies outside. He left his tower unprotected, ran away from it to the station, where it was found, naturally, that something was wrong with him. A relief man was hastened to the tower, but in the meantime a serious wreck occurred and several people were killed. That disaster could have been averted by such examinations as Dr. Diller recommends. That young man is now in a state insane asylum at Indianapolis—a very characteristic case of paranoid dementia praecox. The chances are that some indications of the condition were manifest prior to this accident.

The difficulty, it seems to me, arises in a twofold way. I believe the officials of the railroads are anxious, not only from the humanitarian, but from an economic standpoint, to arrive at some satisfactory solution. I believe that difficulty would be encountered from the side of the men—from the unions, the labor unions, and also from the patient's family. The chances are they would conceal as much as possible of the history of these individuals, because the family is dependent upon the salary of these individuals, and they would have a selfish interest in keeping quiet about these conditions as long as possible. But some method should be arrived at to minimize as much as possible the disasters which occur in these seeming cases of individual neglect which not infrequently are due not to neglect, but to illness.

Dr. James W. Milligan, Michigan City, Ind.: I should like to emphasize, if possible, the excellent point brought out in the paper. It is certainly an encouraging sign of the times when such a corporation as the one to which the doctor belongs is not only examining the watches of its men, but examining the men before the watches, or taking steps looking in that direction. It is certainly no less important to examine the man than it is the watch, and in recognizing this importance the railroad has made a step in advance. This organization is probably the best of any in the country when it comes to the manner in which it handles its men. I do not know that there are other corporations that are drawing the alcohol line as closely as the Baltimore & Ohio or not, but I hope there are.

I would like to ask whether any of the gentlemen present have found that general paresis is especially prevalent among engineers. I have sometimes thought it was and sometimes that it was not.

Dr. Diller: Yes, it has been prevalent in my experience. But I have had only one year's experience in railroad work.

Dr. A. G. Wittman, Elgin, Ill.: A peculiar situation arises when one of these railroad employes consults a general practitioner and he finds that he is suffering from some disease that lowers his efficiency. A number of years ago I had a railroad em-

ployе under my care who suffered from epilepsy. He had been with the railroad for some four years. During these four years he had had at least two attacks of epilepsy while in what we call the cupola of the caboose, and fell to the floor. One of his first attacks he had during the first year that he was employed there. This illustrates further the difficulty in getting the employes to cooperate or report this condition. This man came to me for advice for another condition, and this history was elicited from him. Then came the question of medical ethics. A man in this condition being your patient, are you supposed to report him and leave him jobless, or is it your duty to notify the railroad company? After some consideration the railroad company was notified in this case, and the man was removed from the railroad service.

Dr. T. B. Throckmorton, Des Moines, Iowa: I feel that Dr. Diller has brought before this society a very timely communication on this subject, and while at first glance it might seem a little out of place in this meeting, yet I feel it is a subject in which we are all sincerely interested. Recently I have had some interesting as well as some amusing circumstances in the examination of railroad employes. As some of you no doubt are well aware, these examinations are and have been largely a matter of routine, so that a man who has been examined by several different roads is largely onto the ropes of this examination. The other day a railroad man came into the office, and laying down the examination paper, said, "I would like to get examined. It does not amount to anything, but the road sent me up here." As a matter of habit, the surgeon in examining the abdomen will always attempt to elicit some abdominal tenderness. So, in examining these men, I have gone carefully over the eye findings, as to the eye movements, and especially as to the pupillary findings, and have also made an examination of the deep reflexes, especially of the lower extremities. When I got through with the man referred to, he said: "I have railroaded from San Francisco to Cleveland; I have been in the United States army and in the United States navy, but I never had anything like this before. Is there something the matter with me?" I told him that out here in this part of the country these examinations were not quite so much a matter of red tape. The railroad wants to know if there is anything wrong with the man.

Dr. Theodore Diller, Pittsburgh, Pa. (closing): I am glad the subject of epilepsy was mentioned. I neglected to speak of it, although I have mentioned it in my paper. It is an extremely important matter, and, of course, it would disqualify a man. I recall a patient I saw several years ago. He came to me as a private patient, to my office, and I learned from him that he suffered from epileptic seizsures, and I learned also that he was fireman on a railroad. After I was through with my examination I said to him that he ought to give up his position, because he might get a convulsion or a fit at some critical time. I told him that it was not right that he should work on. He said to me, "I can't do it; I have a wife and three children dependent upon me for support. I can't give up my position." And I said to him, "You must give it up. You must, and if you don't do it voluntarily, I shall take it upon myself to write to the officers of the company and tell them what is the matter with you, and you will be discharged." This answers the question raised by Dr. Wittman as to the ethics, from my own point of view. It looks to me as though, in a case like this, where the good of the public ought to be put ahead of the good of the individual, we should take this position, and I had no qualms of conscience about breaking the Hippocratic oath in this case. I think it was the plain thing to do. But I did not have to write such a letter. I kept track of the man and learned that he did give up his position and go away.

As to retiring these men, I think the point was made very well by Dr. Sterne that the greatest difficulty would come not from the companies, not from the officers, but from the men themselves and their partners. They do not want to tell on a man they see going down. They hate to see him lose his job and the money which it brings. I think that it is, of course, a great hardship for a man to lose his place, and I believe that it is not only a humane thing, but also a good business policy for the companies to give pretty good allowances to all men who are retired for physical or mental defects. The facts in these cases are so often concealed by the employes and fellow employes.

Speaking of resolutions, I believe that it would be a good thing for this meeting to pass a resolution condemning absolutely the use of alcohol by all men engaged in the transportation service of railroad and steamship companies. I think it would have some effect, coming from this meeting. There are a few railroads taking this stand now. It would strengthen them, and it would lead the others to take it up, perhaps.

THE CAUSES OF ACQUIRED INSANITY*

J. Cheston King, A. B., M. D.

ATLANTA, GA.

We see in the history of medical science today the grotesque forms of knowledge, the extinct creation of observant, thoughtful men; in the light we view them today, seeing how unfit they are to be associated with the forms and conditions of knowledge, we at once conclude that they were not only shortcomings but errors, like unto species decaying and dying out; deflections from the true route of progress.

But in that day and time, they served as a

*Read at a meeting of alienists and neurologists held under the auspices of the Chicago Medical Society, June 23-25, 1913.

complete basis for science, they were as parts of an organic system, complete for that time and potent for a better future. To those who possessed them, they were right, even as to ourselves much of our knowledge is; though a century from now, truths that seemed complete will be like extinct or monstrous forms and happy should we be if some of the doctrines we enunciate from this notable meeting—called together under the auspices of the progressive Chicago Medical Society, in whose ranks are to be found men whose influences reaches far beyond the time and space of their conscious activity—will remain in science with the same meanings as they now bear.

Even if our labors in our special line of work have been like waves in advance of the oncoming tide, we are recompensed. A few may watch them and think them grand and beautiful, but they may break on the shore in what seemed like only trouble and confusion, and the tide passes over them and hides the treasures they have borne. But another generation may come and uncover these treasures and worthily display them.

Even to this day and time every writer on acquired insanity has suggested a special classification of the forms, founded either upon the etiology or symptomatology of the disease; and the numberless classifications founded on psychologic considerations that have been advanced differ more in terminology than in principle and when analyzed are reducible to the principle forms of Hippocrates.

MANIA—MELANCHOLIA AND DEMENTIA

Dr. J. Batty Tuke adopts the following system based upon the proposition of Morel, which marked a great advance in the study of insanity:

1. Idiopathic insanity: Idiopathic mania, melancholia and dementia, general paralysis of the insane.

2. Traumatic insanity.

3. The insanities associated with other neuroses: Epileptic insanity, hysterical insanity, hypochondriacal insanity.

4. Insanity resulting from the presence of adventitious products.

5. Insanities resulting from morbid conditions of the general system: Phthisical insanity, rheumatic insanity, gouty insanity, syphilitic insanity, insanity from sunstroke, anemic insanity.

6. Insanities occurring at evolutional periods: Climacteric insanity, senile insanity, insanity of pregnancy, puerperal insanity.

7. Toxic insanity: Alcoholism, morphinism, plumbism, hydrargyrism, cocainism, absynthism, and in fact all those drugs and agents, which induce structural alterations or perversions of the functional operations of the cerebro spinal system.

I have after critical study and analysis been able to refer those cases of acquired insanity, which have been under my professional care, to the following causes:

1. Hereditary constitution of the cerebrospinal nervous system, induced by intemperance, syphilis, and other causes acting upon one or both parents. Hereditary insanity, implying hereditary weakness of the nervous system, generally comes on without the interruption of appreciable exciting causes. The nervous system seems to be peculiarly liable to be involved in the effect of hereditary degeneracy, and this is frequently evinced by the occurrence of mental symptoms at those periods of life where either rapid structural development takes place, special functional altering is and was exhibited or is ultimately arrested or upon the advent of senile decay.

We have then an insanity of pubescence, a climacteric insanity and a senile insanity. Idiocy and imbecility are frequent results of hereditary weakness, showing itself during fetal life or during the period of dentition. The insanity which often affects women at parturition, insanity of pubescence, climacteric and senile insanity may often be traced to hereditary weakness of the nervous system.

Masturbation. The excitement incident to the habitual and frequent indulgence of the unnatural practice of masturbation leads to the most serious constitutional effects and in some cases to the loss of the higher moral feelings, entire degradation of the moral sense and hopeless insanity. The effects of masturbation are more especially manifested in the nervous system, the functions of which are more or less prevented. The mental faculties become more or less affected, there is great despondency, loss of memory, irritability, irregular action of the heart, derangement of digestion, prostration of strength, neuralgic pains. There is a general loss of health

and strength; chronic hypochondriacal invalidism, epileptic seizure, ending in many cases in hopeless insanity.

Guardians, parents and teachers cannot be too careful in guarding those entrusted to their care from this most degrading and pernicious of all habits. The effects of masturbation in inducing insanity may be witnessed in its victim long after the cessation of the pernicious practice.

Alcoholic Poisoning. 3. Alcoholic insanity is met with in three forms: 1. Acute alcoholic insanity. 2. Chronic alcoholic insanity. 3. Delirium tremens.

Acute alcoholic insanity seldom occurs except when there is a strong hereditary tendency to mental disturbance, or when the cerebral energies have been notably impaired by excesses or overwork. When all the predisposing causes exist it may not require a large dose of alcohol to bring on an attack. The most frequent form of the affection is violent maniacal delirium, known as mania a potu, with a tendency to homicidal acts. In some cases the mental disorder takes the melancholic form, and it becomes necessary to guard against the strong suicidal tendency.

Chronic alcoholic insanity is one of the results of chronic alcoholism and illustrates in a forceful manner the solidarity of the psychical and somatic functions of the nervous system and the interdependence of their morbid manifestations. The mental symptoms are generally all present from the beginning. The sleeplessness so characteristic of commencing disorder is an early symptom; then restlessness and depression with suicidal tendency, sometimes passing rapidly into complete dementia, but generally passing through a course of moral and mental degradation, which progresses step by step, with the symptom of failure of the physical nervous power. Chronic alcoholic insanity presents many points of resemblance to general paralysis of the insane, and is in some cases only to be distinguished from it by the presence of mental depression, which is seldom more than a transitory symptom in the general paralysis.

Delirium tremens. It is important to note that after the acute symptoms have passed away, in some cases there is left behind a state of subacute insanity of characteristic nature. At first suicidal symptoms are apt to appear, suspicions of poisoning, fear of impending evil and hallucinations of hearing. The ordinary vinic or ethyl alcohol in any and every shape, as a sufficient exciting cause of alcoholic insanity is beyond doubt. The more concentrated the alcohol is taken, the more surely and rapidly are its characteristic effects induced; and although some beverages give a greater liability to certain forms of disease than to others, yet the ultimate tissue changes produced by all are particularly similar and of a markedly degenerate character. Chronic alcoholic drinking is undoubtedly hereditary in many cases; not that the ancestors have been necessarily drunkards, but that the family is of an unstable nervous organization, and that the neurotic trait, which shows itself in other members in such affections as epilepsy, hysteria, insanity, is manifested in these cases by an intense craving for alcohol. Sometimes a pernicious education by fostering habits of indulgence in early youth has led to subsequent excess and chronic alcoholism; and the injudicious prescribing of stimulants has occasionally been productive of similar harm. It is well known to pathologists that a large amount of ardent spirits acts on the nerve centers as a narcotic poison and causes rapid death by coma, small quantities produce intoxication accompanied with or followed by an acute conjestion and catarrh of the alimentary canal, especially of the stomach and duodenum. Habitual dram drinking by altering the chemical composition of the blood and checking the normal changes of its corpuscles, excites an injurious influence on the nutrition of the tissues. This is increased by the lessened consumption of food and the alteration in the caliber of the blood-vessels, set up at first by a special action on the vasomotor nerves, and afterwards maintained by degeneration of their coats, as well as frequently of the heart itself. Alcohol interferes directly with the nutrition of the cell elements of the various organs, including the cerebro-spinal system, as it circulates through them and it retards the elimination of effete materials, carbonic acid, uric acid and urea. In chronic alcoholism the amount of fat in the blood is increased. Chronic congestion and catarrh of the stomach leading to atrophy of the glands and an increase in the sub-mucous connective tissue are very common. The liver is at first enlarged

from congestion and may continue so from a subsequent infiltration of fat, but more frequently it shrinks away to cirrhosis. Emphysema, chronic bronchitis and hypostatic pneumonia are common. The heart is flabby, dilated and presents fatty infiltration and even degeneration of its muscular tissue, but it may be hypertrophied probably as a result of coexistent disease of the kidneys. The arteries and endocardium are studded with other small deposits, the capillaries are congested and the veins varicose. The kidneys exhibit commonly the granular form of Bright's disease. The muscles are pale and flabby, the formation of fat takes place at the expense of the bony texture. The nerve centers are atrophied and tough, the convolutions are shrunken, the nerve cells and nerve fibers are wasted and an increased amount of serous fluid exists in the ventricles and subarachnoid space. The abnormal adhesion of the dura mater to the cranium, the large Pacchionian bodies, the opaque arachnoid, and the thickened pia-mater, all testify to an aggravated development of fibrous tissue.

For the above reasons our alms-houses, prisons, hospitals and asylums are filled with diseased, suffering and often incurable human beings.

The last and most prominent cause for acquired insanity is due to the effect of the action of the poison of syphilis. Insanity often results from the degeneration of the ganglionic cells, nerve tissues and from the formation of gummatous tumors upon the various portions of the cerebro-spinal nervous system. When constitutional syphilis affects the brain and nervous system, the mental symptoms that arise are found, in the majority of cases, to present marked similarity in their character. The mental disturbance is generally preceded by distressing sleeplessness; this is followed by increasing depression of mind. Religious anxiety of a peculiarly hopeless character frequently shows itself. The feeling of alarm which accompanies these symptoms sometimes develops into a violent excitement, which may be called maniacal. The development of gummy products within the cranium is frequently evinced by symptoms similar to those of general paralysis. Headache of persistent character, giddiness, vertigo and epileptoid fits occur, accompanied at first with mental depression.

5. Epilepsy—congenital and hereditary.
6. Religious excitement.

The contemplation of certain hypotheses and dogmas held and vehemently urged from the pulpit by some religious sects, have without doubt, produced great excitement and alarm in the minds of persons of excitable and unstable nervous organization. The burning eloquence and moral pictures of the religious enthusiast and fanatic; the horrible revelation of the melancholy and sinister imagination of Dante, have aroused indescribable forebodings and alarm in the souls of the unwary and timid.

The violent exercise of certain sects, during the performance of so-called religious exercises, such as shouting, hopping, jumping, dancing, speaking in unknown tongues, often induce epileptic seizure and inaugurate such exhaustion of the nervous structures as induce religious melancholy and end in hopeless insanity.

It is foreign to this paper to dwell upon all the causes of acquired insanity, for I would have to enter into detail upon the effects of race, occupation, climate, age and education. My only incentive is to bring before this honorable body the most prominent causes of acquired insanity, which will result in exciting the public interest in the most distressed and most unfortunate class of fellow citizens, to the end that abuses may be corrected, wrongs righted and the amount of human suffering lessened.

DISCUSSION.

Dr. E. M. Mikkelsen, Chicago: I would like to ask Dr. King where he finds his field of practice, after eliminating alcohol and venereal disease? I have been in this work and general work for years and I have always felt that if we could eliminate alcohol from the world there would be very little left to treat.

Dr. King (closing the discussion): I have nothing further to say except this: When we can inaugurate in our public school system the teaching on these lines, and especially on the line of sexual hygiene, I believe that we will eradicate a large percentage of acquired insanity. It is perfectly astonishing to see the percentage of patients who come absolutely under the classification of functional disorders, and these to a great extent are induced by excesses in different lines of life, excesses in drinking, excesses in the use of tobacco, excesses in eating, excesses in the business strains of life, and under their proper regulation and environment the results are most satisfactory.

ACUTE ALCOHOLIC INSANITY*

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The frequency with which we encounter acute mental derangement in the course of chronic alcoholism warrants an investigation of the symptoms which characterize these acute manifestations, also, if possible, a designation of types or constitutions in whom these derangements occur. With this purpose in mind 125 cases of alcoholic insanity consecutively admitted during a period of about two years were reviewed. This number represents approximately 17 per cent of the male admissions for all causes; the females were disregarded owing to their infrequency, there being but five cases of this type admitted on the female side during this period. Of these 125 cases, 100 were conditions classified as acute alcoholic insanity. The remaining twenty-five were diagnosed chronic alcoholic insanity and they represented conditions of general mental enfeeblement without particular trend or paranoic conditions of the well known infidelity type.

The acute derangements were sub-grouped into two classes, viz., acute hallucinosis and acute delirium. The latter group contributed 60 per cent and the former 40 per cent of the 100 admitted. The separation of acute hallucinosis and acute delirium is not possible in every instance. The factors which make possible this differentiation are the relative prominence of certain symptoms common to both disorders and in many cases these symptoms are present to an equal degree, consequently the separation into two types becomes impossible. It may be argued that this separation is of no practical value in that the conditions are not separate entities. The latter contention is admitted, yet it is offered that the separation is of value in prognosis as will be shown later. No attempt is made to view these conditions as separable from an etiologic or pathologic standpoint; simply that each offers a clinical picture which in the large majority of cases remains distinct. This difference in clinical manifestation is thought to depend on the anatomical distribution of the same lesion.

The acute disorders irrespective of clinical type have many conditions in common. They occur during the course of chronic alcoholism. They are acute in onset. They are both characterized by hallucinations and clouding of consciousness of varying degree. In both conditions one observes a reaction of fear and apprehension depending to a large degree upon the extent of disorientation.

When the clouding of consciousness is sufficient to cause a subsequent amnesia for the period of hallucinosis it has been our practice to designate the case as acute delirium. When this amnesia is not present, in other words, when consciousness is less affected and the patient can recall more or less distinctly events that transpired during the period of active hallucinosis, the case is referred to as acute hallucinosis. Yet emphasis is laid upon the fact that a disturbance of consciousness occurs in both types, the degree of disturbance being the means of differentiating these acute conditions.

The acute conditions are furthermore similar in that recovery is frequent yet the course of the disorder is somewhat protracted in the case of acute hallucinosis as compared with acute delirium. Further the few cases that failed to recover, six in all, belonged in every instance to the group of acute hallucinosis while the seven deaths among this series were cases of acute delirium.

As previously mentioned, these conditions are preceded by long and continued use of alcohol. The history obtained is so constant as to become classical of these disorders. Without exception we get an account of the steady use of liquor for a period of years, at first, the lighter beverages, though later the spirituous liquors almost entirely. After a varied period the individual experiences gastric distress particularly on arising. Accompanying this is a loss of appetite bordering on a disgust for food. Within a short time the distress takes the form of nausea, retching or vomiting and at about this time the patient finds a real or fancied relief in the before-breakfast drink.

As a rule, following this gastric disturbance though occasionally preceding or accompanying it, we obtain a history of muscular cramps. These in the vast majority of cases are referred to the calf muscles, frequently the thighs and occasionally the arm and shoulder. In two instances the pain was felt in the small muscles of the hands and forearms. In several instances attacks of facial neuralgia were mentioned. In no case,

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however, was the history of some distress of this character absent. It is true that many patients look upon these conditions as of rheumatic origin and many will claim that they have had attacks of muscular rheumatism. It has been our practice, however, to view these pains as of neuritic origin.

The cases designated as acute hallucinosis, while rapid in onset, were less so than those referred to as acute delirium. The average duration of mental manifestations previous to hospital admission was three weeks. The onset in the majority of cases was a feeling of uneasiness and strangeness. The usual surroundings appeared somewhat unfamiliar, a mild apprehension following. After a few days, a hissing, buzzing or ringing in the ear developed which soon took the form of the patient's name, later the names of members of his family or friends, then curses and accusations were added. Usually within a week the auditory hallucinations were well marked and attributed to strangers or occasionally acquaintances who were not within the field of vision but just beyond. As a rule, following these manifestations, illusions of sight developed and later hallucinations. Familiar faces are recognized among total strangers. The persecutors who annoy with their constant accusations are frequently seen just at the extremity of the visual field, observed lurking in the shadows, dodging in the hallways or momentarily viewed at the window. Rarely do these patients have a distinct and well defined visual hallucination. The mental distress now becomes very acute; the fear of personal harm dominates the patient's behavior so much so that some made application to the police for protection. In two instances rather than suffer the tortures that were threatened, the patients made a desperate attempt at suicide.

The average length of time during which the hallucinations remain active is six weeks. The visual are of the shortest duration and are the first to disappear. Gradually the auditory become dimmed until they cease entirely. This disappearance of the hallucinations is spread over a period of several days, the last visual are usually seen toward evening. The patient while apparently clear and oriented throughout this period now loses the slight haziness and retentive defects that are demonstrable during this period of hallucinosis and becomes normal in his adaptability to his environment.

The seven cases that continued and can be termed chronic hallucinosis showed relatively few visual hallucinations; further in their course the auditory hallucinations alone remained active. The fear reaction became less and less marked until finally the patients were quite indifferent to the voices that persisted. Their retentive faculties became more and more impaired until their memory was considerably affected.

The conditions designated as acute delirium are, in contrast to acute hallucinosis, much more rapid in their onset. Within a day or two, the patient changes from a condition of consciousness to one bordering on the unconscious. Many give a history of uneasiness and restlessness for several days preceding the breakdown. Many have vivid dreams and are sleepless and uneasy at night. Suddenly, as a rule toward evening, they become very confused and at times completely lost to their surroundings. After a few days these patients are brought to the hospital. Without exception they are disoriented for time and place. If momentarily a relevant reply can be obtained from the patient, this confusion is acknowledged. The presence of active visual and auditory hallucinations is evident in the patient's talk and behavior. He begs to be spared; asks piteously when the sentence is to be carried out; whether he is to be burned alive, electrocuted or hanged; he looks about furtively as if expecting bodily harm at any moment. He begs to have his persecutors cease their endless accusations. He calls to attendants by familiar names; complains bitterly of the electricity that is turned on him. He smells noxious fumes in the room and tastes poison in the food. Everything that goes on about him simply has as its ultimate purpose his vilification, torture and destruction.

After a period of a week or so, during which time the hallucinations abate somewhat though the mental confusion continues unchanged, the patient will, as a rule, fall into a deep and prolonged sleep following which he awakes perfectly clear, orients himself and recovers.

When asked as to their past experience, they have a very hazy recollection of what transpired. Many refer to their delirium as "a bad dream." They have no knowledge of the number of days spent at the hospital. While able to relate many

of their hallucinatory experiences they cannot give these in the sequence in which they occurred nor can they associate them to day or night time. Occasionally they have an indistinct recollection of being in the continuous bath or wet pack though this recollection is not fixed and must in many instances be prompted by questions.

The condition just described is without doubt viewed by many as delirium tremens, however, in the selection of these cases, delirium tremens was restricted to those cases that showed great muscular agitation, cold clammy skin with occasional profuse sweats and a delirium of a low muttering type from which the patient could not be aroused. Furthermore in these cases hallucinations and fear reactions were not prominent. They showed more gastro-intestinal disturbance and frequently a temperature. Finally, this latter type of delirium is looked upon as much more serious from the standpoint of prognosis though here the difference is thought to be simply one of clinical manifestation, in this instance, due to the amount of intoxication.

In either of the acute conditions, viz., acute hallucinosis or acute delirium, it is thought that the fear reaction, which is so constant as to be diagnostic, depends upon the clouding of consciousness. In the hallucinatory cases with less disturbance of consciousness though very active hallucinations of threatening and condemnatory character, it was frequently observed that a mild uneasiness and relatively slight apprehension were present while in those whose orientation was more affected this mild reaction became a great and distressing fear. These clinical varieties can be accounted for if one keeps in mind the lesions of the nervous system ascribed to chronic alcoholism. The parenchymatous alterations of the nerve fibres, the chromatolysis of the nerve cells and swollen dendrits described by many investigators offer sufficient ground to assume an impairment of nerve conductivity. In the hallucinatory form it is assumed that peripheral nerves are most affected and this is very strikingly borne out by the physical findings in these cases.

Of the 100 cases examined all showed the classical tremors of chronic alcoholism and equally constant was a tenderness of muscles to deep pressure. Disturbance of deep and superficial reflexes was present in 88 of the 100 cases examined. The ankle jerks were more constantly absent or much diminished than the knee jerks though the latter were affected in over 60 per cent of the cases. Diminished tactile sensibility, particularly over the lower extremity was very frequent. Some cases showed an increased irritability to painful stimuli in the areas of hypasthesia. Fourteen cases showed pupillary anomalies in the nature of slight inequality or irregularity of outline and limited reaction. In no instance, however, was the pupillary reaction selective in its limitations, that is, the response to light and accommodation seemed equally affected. These indications of a peripheral neuritis were more contsant in the cases of acute hallucinosis than in the deliria. With two exceptions every case of acute hallucinosis gave unmistakable evidence of a peripheral neuritis or residuals attributable to this type of neuritis.

Reviewing the alcoholic habits of these patients, one is impressed at once that the amount of indulgence is not the sole etiologic factor. While many average a pint or more, still an equal number do not exceed three or four drinks per day. Such indulgences are very common, yet of the many so addicted relatively few have the nervous manifestations under discussion. The natural inference is that those developing nervous disorders attributable to alcohol have an inherent susceptibility. This conclusion receives considerable support in the observation that few of these patients showed any of the hepatic, cardiovascular, or nephritic complexes so frequent in chronic alcoholism. It would seem that primarily the nervous system bears the brunt of the intoxication. This vulnerability can in part be accounted for by the defective heredity observed in these cases.

In 62 of the 100 cases reported on, a reliable family history was obtained. An effort was made in each instance to verify as much as possible the history given, the character of the disorder mentioned and its severity. The occurrence of apoplectic attacks, hemiplegias or other forms of paralysis when of early occurrence, epilepsy and hysteria were classed as severe nervous diseases. Suicides and inferiors were included as mental conditions. In selecting only such very evident cases it is probable that many slighter forms of nervous trouble and mental affliction are missed; still accepting only the very evident conditions,

28 of the 62 cases in whom reliable history was obtained showed the presence of nervous disease and insanity in the immediate ancestry of the patient. In 17 cases a history of severe physical disorder among the parents was obtained. Such conditions as tuberculosis, diabetes and in nine cases, cancer. Alcoholism was not frequent among the parents but quite frequent among the brothers of the patients. A surprising result of this review was the frequency with which tuberculosis occurred among the immediate members of the patient's fraternity. In a number of cases several brothers and sisters suffered from pulmonary tuberculosis. Thirty cases of the 62 gave a history of this infection in the immediate members of the family. One could infer from these findings that the progeny of defective parentage not only showed a vulnerability to the toxic effects of alcohol but those not victims of addictions become fruitful soil for the tubercle bacillus.

Contributory causes in the nature of physical illnesses were not frequent. By far the greater number suffered from privation, starvation or physical strain previous to the mental upset. In many mental stress figured prominently as an incidental cause. Less than 10 per cent showed an apparent delay in the hallucinatory manifestations, that is, after a period of abstinence for several days the acute conditions developed. In these instances the patients were under arrest, usually lodged in a town lockup, harassed and annoyed by ignorant police officials, frequently underfed owing to lack of medical supervision in the use of food, all conditions contributing to further lower the individual's resistance and enhance the poisonous effects of the accumulated intoxicant. It was furthermore observed that the patients who developed their acute conditions during abstinence invariably showed greater gastro-intestinal disorder in the nature of coated tongue, foul breath, constipation and intolerance of food. In two instances after several months of hospital residence, a relapse occurred in the nature of a mild hallucinosis. At the time we had quite an epidemic of influenza at the institution and both of thes patients were affected just previous to their relapse.

The treatment of the acute conditions can be summarized as eliminative and supportive. To aid elimination, hydrotherapy is in our experience most effective. The continuous bath at a temperature of 98 or 100 as indicated in the delirious cases, particularly those bordering on delirium tremens, yet when heart action seems particularly affected we found wet packs of more service. These packs are applied cold at a temperature of 50 or 55. Within fifteen minutes if a favorable reaction occurs the pack becomes warm and shortly after the patient breaks into a profuse sweat. He is kept in the pack for another half hour or more, then removed to a quiet room and very frequently sleep ensues. Elimination is further aided by brisk catharsis. It has been our practice to give an initial dose of calomel followed by salines which are continued daily. On admission, almost by routine, these patients are placed on strychnin. If the pulse is feeble and irregular, the drug is given hypodermatically in sufficient doses to regular the heart action. Digitalin is indicated in the delirious cases, particularly those of the severer type. Ordinarily hypnotics are not required. As a rule, the wet pack or continuous bath serves as a sedative. In the severe delirious cases, however, it has been found expedient to employ hypnotics of which paraldehyde is preferred yet many refuse to take this drug and we then use hyoscin and morphin. This combination has been of immense service in our hands. The drugs are given simultaneously in dosage of hyoscin, gr. 0.01 and morphin, gr. 0.25. The action of the morphin seems to sustain the immediate quieting effect of hyoscin and in our experience has a favorable, stimulating effect on the cardiac system. In the hallucinatory forms, hydrotherapeutic measures and brisk catharsis usually suffice to bring about a favorable termination. In either acute condition, however, the administration of nourishment is particularly important. Liquid food in the form of milk, egg-nogs, broths, etc., are given to the limit of indulgence. The patient is encouraged to drink as much water as possible. In cases of gastric intolerance, the administration of a weak solution of cocaine has been very beneficial. After recovery from the acute conditions, continued nourishing diet, active exercise in the form of employment, regularity in habits, such as are enforced at institutions bring about a complete recovery within a period of two or three months.

Concerning prophylaxis it is our belief that primarily these patients have a defective consti-

tution, which leaves them potentially victims of any severe mental or physical stress, that the prevention of these conditions becomes a matter of eugenics, as well as euthenics.

DISCUSSION

Dr. M. A. Bahr, Indianapolis, Ind.: I would like to ask Dr. Lorenz if he considers his case a pronounced hallucinosis? Does he consider the Karsakoff psychosis and this psychosis as being one and the same thing, and, if not, how does he differentiate them?

Dr. F. F. Leonard, Jacksonville, Ill.: I find that the more acute the hallucinosis the quicker they recover. The peculiar thing about these patients is that they will admit the alcohol and do not seem to be ashamed of it.

Dr. Lorenz' treatment is practically the same as we give at the Jacksonville Hospital—hydrotherapy and elimination.

I remember a case of acute alcoholism in a patient, with confusion, for over two years. One morning, in about two years, he suddenly asked where he was and how long he had been there. Since then he has made a complete recovery. He was a vendor and followed the side shows from one place to another.

Dr. Harold N. Moyer, 31 N. State St., Chicago: I doubt if the alcohol has different effects in different individuals, that many of these patients are probably liable to a psychosis precipitated by alcohol, and the psychosis is to some extent colored by the alcohol, in whole or in part. A very wise patient of mine one day came to see me and asked about getting his brother into an institution. He said, "Do you remember me? More than twenty years ago you came to see me and I was as crazy as a bedbug. You said I had typhoid fever and that I was insane, but if they would treat me for the typhoid fever I would get all over it. That is true. I had the typhoid fever. Now I wish to ask you, is my brother crazy? The reason my typhoid fever made me crazy is that that is in my constitution." I said I guessed that was right.

Dr. Lorenz, Mendota, Wis. (closing the discussion): In regard to Dr. Bahr's question concerning the placing of the Karsakoff phychosis, I would say that it was the study of the Karsakoff condition which impressed me with the frequency of peripheral neuritis in other conditions. My view of the Karsakoff phychosis in relation to the other is that it is simply an aggravated condition, with a more severe peripheral neuritis than one observes in the hallucinatory form or in the delusional form. They are all one and the same condition—simply the clinical manifestations depending upon the distribution of the lesion as well as the severity of the lesion, and the Karsakoff conditions would be included with the acute alcohol intoxications.

ORIGIN (?) OF THE BOAS-OPPLER BACILLUS IN GASTRIC CARCINOMA.*

ARTHUR E. GAMMAGE, M.D.
CHICAGO.

This paper, as its title would imply, is an interrogative, and is prompted by the desire to bring before you for discussion the origin of the Boas-Oppler bacillus in the stomach contents of cases suffering from gastric carcinoma.

We are rather in the dark concerning the nature of this organism, although it has been under observation since 1895, when it was first described by Oppler. Its association with lactic acid formation and cancer of the stomach was first observed by Boas and later studied more accurately by Oppler, Schmidt, Strauss and others.

The Boas-Oppler bacilli, also designated Fadenbazillen, are unusually long and threadlike, non-motile, anaërobic, and no-spore forming. They stain readily with aniline dyes and are Gram positive. They vary in length from 6 to 8μ and are about 1μ in thickness. Usually they present end to end in running formations, or they may be seen detached from one another and lying in all directions like small sticks, or they may join each other in a zigzag order. They are rather active lactic acid producers and are not pathogenic to man or even inferior animals. Bassler divides the bacilli into two chief morphologic varieties, the most common being an exceptionally long bacillus, joined end to end, and arranged in long threads and zigzag lines. The second common type he describes as a shorter and thicker organism and as being of much lesser importance than the former from a diagnostic standpoint.

Kauffmann was the first to ascribe to this organism the power of forming lactic acid from various kinds of sugar. He and Schlessinger[2] were the first to succeed in establshing a pure culture of this bacillus upon flesh-peptone-agar with the addition of carcinomatous gastric contents, then also upon beer-wort and glucose-agar. Strauss could also make a pure culture upon flesh-peptone-agar and carcinomatous gastric contents with the addition of a small quantity

*Read before the North Shore Branch, Chicago Medical Society, October 7, 1913.

1. Boas, Specielle Diagnostik und Therapie der Magenkrankheiten. Oppler, Deutche Medicinische Wochenschrift, 1895, 5.

2. Kauffmann and Schlessinger, Wiener Klinische Rundschau, 1895, 5.

of a sterilized solution of glucose. It may also be grown on blood serum and usually also on plain agar, but it is very apt to undergo changes in size which may lead one to think that it has been lost or overgrown by other bacilli.

The frequency with which these bacilli are found in the stomach contents of gastric carcinoma have given them a relative diagnostic value in this condition. Butler[3] states: "The Boas-Oppler bacillus is found in from 75 to 85 per cent. of the cases of carcinoma of the stomach." John C. Hemmeter[4] found the bacilli in 52 out of 55 cases, and he has also found them in a case of benign pyloric stenosis and occasionally in cases where HC1. was still present. Stockton stated that it had not been found in other diseases of the stomach."

When the Boas-Oppler bacilli are found in gastric contents, lactic acid is a constant accompaniment and in excessive amount. On the other hand, we may find lactic acid in the stomach contents, but not the Boas-Oppler bacilli, thus indicating that they are active lactic acid producers. Boas[5] says: "The bacilli are capable of coagulating milk, but, above all, of generating lactic acid from various kinds of sugar. They may, therefore, quite correctly be designated as the inciting factor, or at least as one of the inciting factors, of lactic acid formation in the stomach."

Lactic acid formation in the normal stomach during digestion does not take place. When this occurs it is pathologic and is occasioned by conditions where obstruction and fermentation have permitted organic acid formation. Thus, we have in gastric carcinoma ideal conditions for its formation, but we must not forget that in benign pyloric stenosis, and sometimes in high degrees of primary atony, lactic acid may be present in plainly increased amounts. In food there is always a small amount of lactic acid derived either from milk, milk foods, bread, fish or meats (sarcolactic acid). When lactic acid is found in normal gastric contents, it has been introduced in the food, but the quantity thus ingested is insufficient to react to the usual tests employed for its detection.

Kauffmann[2] found the bacilli in 19 out of 20 cases, and in the one case in which it was absent there was no lactic acid. He declares that the presence of large numbers of the bacilli in association with pyloric stenosis to be an indication of carcinoma, and their absence, associated with the absence of lactic acid, to be evidence against carcinoma.

Johnson draws attention to those cases in which cancer is grafted on the base of a chronic ulcer. HC1. may be increased or normal throughout the disease, or disappear at a very late period. In these cases lactic acid and the Boas-Oppler bacillus will be absent, or appear only at a very late period when the HC1. has disappeared.

Bassler[6] says, "The Boas-Oppler bacillus is probably of the genus leptothrix and is usually met with in large numbers in stomach contents of gastric cancer when motility and chemism (HC1.) of the organ is markedly interfered with. On these occasions they may also be found in the mouth, esophagus or occasionally in the intestines, to which localities they are probably carried from the stomach in the vomitus or by exit through the pylorus. Contrary to other saphrophytes (yeast, sarcinæ) which can proliferate in delayed conditions of the stomach, the *long bacilli* require marked stagnation of the organ, and, since the dual agencies of absence of digestive stomach secretion and the high degrees of obstruction are more commonly present in gastric cancer, they are of much significance in the diagnosis of this disease. . . . I have yet to see the stomach contents from a non-malignant case show definitely the presence of the long bacillus. The demonstration of the long bacillus is even a more important diagnostic finding than lactic acid, since only a small amount of gastric contents are necessary for examination."

From the foregoing we can conclude that the Boas-Oppler bacillus is quite constantly present in the stomach contents of gastric carcinoma cases, and although it is occasionally found in other conditions, the presence of the long bacillus, as described by Bassler, is almost pathognomonic of cancer.

In conclusion I am forced to state that, after extended search through the available literature of the original investigators of this organism, as well as through the more recent contributions to this subject, I have failed to find any definite statement as to the origin of the Boas-Oppler bacillus. However, during the preparation of this paper I had constantly in mind three interrogatories. 1. Do the Boas-Oppler bacilli originate in the stomach in gastric cancer cases? 2. Are

3. Butler, Diagnostics of Internal Medicine. 1907, p. 655.
4. Tyson, Practice of Medicine. 1906, p. 869.
5. Boas, Dis. of Stomach. p. 578.
6. Bassler. Dis. of Stomach. 1910, p. 315.

they some of the more common gastric bacterial flora which have undergone a morphologic change? 3. Are they ingested with the food as such?

Do the Boas-Oppler bacilli originate in the stomach in cancer cases? This I feel I can answer definitely when I state that they do not and are in no way concerned directly with a cancer being present in the stomach, and only in the way that cancer, being present in the stomach, causes a change in the organ in the way of influencing its secreto-dynamic state so that these bacteria can proliferate. They are not produced directly by the cancer, nor in a broad way can they be taken as diagnostic of cancer being present, although when they are found, especially the long bacilli as described by Bassler, they possess a diagnostic value, although indirect, still very important.

Are they some of the more common gastric bacterial flora which have undergone a morphologic change? We are all familiar with the fact that there are normally present in the gastrointestinal tract various microörganisms, chiefly saphrophytic in character. Under certain local or systemic conditions, especially in the upper alimentary canal, we are at times confronted with unexplainable pathologic phenomena. It seems to me quite reasonable to suppose that under the changed local, and by this time, systemic conditions, some of the normal gastric bacterial flora may undergo certain biological changes because of their environment, and be isolated and described as the Boas-Oppler bacilli.

Are they ingested with the food as such? This I believe to be the method of their entrance. In coagulated milk an organism is frequently found that is strikingly similar and believed by some (J. W. Jobling) to be the same. A similar organism is also found on the surface of plants and elsewhere. That this bacillus can be grown artificially, I have pointed out, but the culture medium used must be rendered acid by lactic acid in the amounts of this that is usually found present in the stomach contents of cancer cases. I mention this to prove that the presence of lactic acid makes the medium favorable for the proliferation of this organism, and, as you know, in the late cases of cancer of the stomach the absence of HCl. and the presence of lactic acid are commonly found. Taking, then, stagnation of food contents, with the generation of organic acids of which lactic acid is one, the heat and moisture of the body, and the constantly taking in of food which is more or less infected with bacteria, the conditions are favorable for the proliferation of the Boas-Oppler bacilli, if introduced. It is probable that the observations of Schlessinger and Kauffmann, and also Strauss, in which carcinomatous gastric contents were added to the medias, that it was only the lactic acid contained in the carcinomatous contents that served to stimulate the growth of these organisms in an artificial way and nothing specifically toxic from the carcinoma itself, because plain commercial lactic acid will serve as well.

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DISCUSSION.

Dr. John Dill Robertson: There is little to be added to the exhaustive paper as read by Dr. Gammage.

The consensus of opinion of the authorities quoted by him is that in approximately 15 to 20 per cent. of the cases of gastric carcinoma the Boas-Oppler bacilli cannot be found. They fail to state, however, whether these cases were carcinoma of the pylorus or of some other part of the stomach.

I think that perhaps too much blame is placed upon the chemical effects of the carcinomatous process and not enough upon the mechanical obstruction which it produces.

Undoubtedly, the presence of a carcinomatous growth in the stomach wall limits its secreting area by the amount of mucous-secreting surface obliterated by that growth, but I think the surgeon is more and more taking into consideration as the great factor, the gastrectasis which is produced by the presence of the obstructing mass in the pylorus.

As the organ dilates, the wall becomes thinner and this affects not only the muscularis, but the mucosa as well. As the mucous lining stretches and thins out, the tubular glands, lined with columnar epithelial cells, and the cells lying outside of them, known as hydrochloric acid cells, are obliterated. The amount of normal gastric secretion is therefore limited, not on account of some chemical effect of the cancer juice or toxin, but largely from a mechanical cause.

Therefore, were the 15 or 20 per cent. of the cases in which the Boas-Oppler bacilli were not found cases of carcinoma with or without gastrectasis?

It has been stated that these bacteria have been occasionally found in cases of non-malignant gastrectasis. If this be true, the next question is, was the gastrectasis accompanied with thin gastric walls,, or, did the gastric wall thicken as the organ dilated, and in this manner preserve a secreting

mucous membrane adequate to maintain the gastric juice in a more or less normal condition?

It is my opinion that, as the pylorus becomes more and more occluded by the growth, and as the diet becomes more and more liquid, and that usually this liquid is milk, the Boas-Oppler bacilli came, not only on account of the absence of normal gastric juice, but that the organisms were ingested with the food (milk), which was a favorable pabulum for it and which afforded an ideal media for the production of lactic acid, and that therefore this bacillus is not a part of the cancer process, and its presence is only incidental to the absence of normal gastric secretion and to the food ingested.

A SIMPLE METHOD OF PREPARING CATGUT.*

E. M. SALA, M.D.
ROCK ISLAND, ILL.

Simplicity is the cry of the age, and the simplest way is usually the best. In this short paper I do not wish to criticise any method of preparing suture material.

We have many excellent methods of preparing catgut today for surgical work, and they are perfect as far as the destruction of germ life is concerned, but many of them are rather difficult to carry out, especially where only a limited amount of gut is used each day, or possibly two or three days each week.

The method I wish to offer is really the use of two different solutions, one for sterilization and one for preservation. The solutions, however, are quickly made and the whole "gig" is up in a "jiffy."

We first obtain clean gut, which has been already prepared for sterilization. It is first twisted or rolled in lengths suitable for suture material and placed in glass stoppered bottles containing full strength Harrington's solution, which is as follows:

Corrosive sublimate	grs. 3.5
Hydrochloric acid	℥as
Alcohol	℥n
Water	℥üss

This makes eight ounces, which is a convenient quantity for use. Experiments carried on by Harrington proved that this solution "rendered pus from a carbuncle sterile in less than a minute. Tried on the hands of several people, in every instance, two minutes immersion, after washing, "rendered the hands experimentally sterile. The nails seemed to be the most resistant parts. This combination is more effective than a proportionate amount of any of the substances singly, a fact that the author confesses his inability to explain."

The gut is left in this solution for ten hours. It is then poured off and the sutures washed in Ochsner's solution. Sutures are then transferred to bottles containing Ochsner's solution, which is as follows:

Iodoform	1 part
Ether	5 parts
Alcohol	14 parts

It remains in this solution until needed for operations. The writer has used the Ochsner solution for preserving catgut during the past ten or more years. The gut becomes well impregnated with iodoform and is pliable and nice to work with. It should not be left in iodoform solution much over three months, because the iodine ultimately destroys its tensile strength, but I have used some gut that has remained in the solution as long as twelve months, and it still was good, strong gut. It is possible that a much shorter time in Harrington's solution would be sufficient to effect a perfect sterilization, but this length of time does not seem to injure the gut to any appreciable extent. We found by leaving the gut in Harrington's solution for three months that it was entirely disintegrated, the muriatic acid having digested it completely. Since it requires only "ten seconds' immersion in Harrington's solution to kill anthrax bacilli," there is really no excuse for leaving the gut in solution more than over night. Furthermore, it is positively injured when left in too long. Any method of sterilization, if carried on for thirty or more days, would likely destroy the gut, so the fact that Harrington's solution positively destroys it in about three months is no argument against this method of sterilization. In conclusion, this method of preparing catgut is simple. The Harrington's solution does not injure the gut unless allowed to remain longer than is necessary to effect a perfect sterilization. The Ochsner preserving solution having stood the test of time and preserving the gut perfectly as long as any other iodine preservative, this makes a simple method of preparing catgut.

*Read at the sixty-third annual meeting of the Illinois State Medical Society at Peoria, May 28, 1913.

THE PREVENTION OF BLINDNESS CAUSED BY OPHTHALMIA NEONATORUM*

A. L. ADAMS, M. D.

JACKSONVILLE, ILL.

The exact meaning of this eye disease is inflammation of the eyes of the new-born. This does not refer to those babies having a little redness of the lids with a very scant secretion, but rather to those babies who have considerable swelling of the eyelids with a profuse discharge of pus a few days after birth.

The United States census for 1900 shows that there were 64,763 blind persons in this country, of whom 3,707 were in the state of Illinois. This places Illinois fourth among the states as to the number of blind. About 12 per cent of these are under 20 years of age, that is, of school age. It is generally estimated that an average of 25 per cent of the total number of blind are so as a result of this disease. This would make an army of almost 20,000 people in the United States and a thousand in the state of Illinois. Consider for a moment! Blind from birth and blind for a life time. Almost entirely preventable. This army is continually receiving new recruits because of the ignorance, carelessness or viciousness of someone.

Carefully prepared statistics show that next to atrophy of the optic nerve this disease is responsible for more cases of blindness than any other eye disease.

Reports from 22 state schools for the blind in the United States, with a total number of students of 2,549, show that 755 or 29 per cent, are blind as a result of ophthalmia neonatorum. Of new admissions to these schools last fall, 444 in number, there were blind from ophthalmia neonatorum 99, or 22.29 per cent. While it is difficult to wisely draw conclusions from statistics I would call attention to the record of Massachusetts, where out of 45 new admissions only 4, or 8.8 per cent, were due to this disease. It seems fair to attribute this to a campaign of education among all classes of society. In contrast to this, in western Pennsylvania 30.7 per cent of all the students in their school for the blind are blind as a result of ophthalmia neonatorum and 40 per cent of the new admissions are due to this cause.

Before the days of antiseptics, this disease was a scourge and in maternity hospitals abroad from 19 to 20 per cent of all children born developed this disease. In 1880, Crede of Leipzig presented to the medical profession his epoch making paper announcing the cure of ophthalmia neonatorum by the use of a 2 per cent nitrate of silver solution, one drop of which was dropped on the cornea of each eye at the birth of each child. After using this preventive treatment the number of cases developing was reduced from almost 10 per cent to 0.02 per cent. Furthermore, the same treatment carried out where the disease had developed proved very satisfactory. and a large per cent were cured.

Kostling of Halle reports that in 17,767 births with no treatment 9.2 per cent developed the ophthalmia of infancy, while in 24,723 births where the silver treatment was used, infection developed in only 0.65 per cent.

At Sloane Maternity Hospital in New York City among 4,660 births during a period of six years in which Credès treatment was carried out no cases of ophthalmia developed.

What can we do to prevent this terrible disease from claiming its victims? I think it an educational problem. It is only a question of reaching the people

December, 1912.

PROPORTION OF PUPILS BLIND FROM OPHTHALMIA NEONATORUM IN TWENTY-TWO STATE SCHOOLS FOR THE BLIND.

	Total No. of Pupils.	Total No. of Pupils Blind from O. N.	Per Cent.	New Admission, 1912-13.	New Pupils Blind from O. N. in 1912-13.	Per Cent.
Arkansas	119	18	15.1	19	2	10.5
California	81	20*	24.6	8	1	12.5
Colorado	42	14	33.3	2	0	0
Connecticut	40	9	22.5	3	0	0
Illinois	222	71*	32.0	58	11	18.9
Idaho	15	2	13.3	5	0	0
Iowa	126	34	26.9	20	6	30.0
Kentucky	112	27	24.1	14	6	42.8
Maryland	100	28	28.0	15	4	26.6
Massachusetts	282	82	29.0	45	4	8.8
Missouri	115	22	19.1	26	4	15.3
Nebraska	52	18	34.6	7	0	0
New Mexico	33	11	33.3	8	3	37.5
New York (outside New York City)	152	42	27.4	17	3	17.6
North Carolina	265	93	35.0	46	14	30.4
Ohio	241	75*	31.1	52	15	28.8
Oregon	30	8	26.6	8	2	25.0
Pennsylvania	207	81	39.1	36	8	22.2
Utah	29	8	27.5	5	1	20.0
Washington	52	12	23.0	15	5	33.3
Western Pennsylvania	130	40	30.7	10	4	40.0
Wisconsin	103	40	38.8	25	6	24.0
Totals	2,549	755	27.9	444	99	22.29

*Estimate.

*Read before the Illinois Congress of Mothers at the Illinois School for the Blind in Jacksonville, May, 1913, and at the Morgan County Medical Society, June 19, 1913.

and especially the mothers to get results. The physicians are doing what they can to give publicity to the facts. But the very people that need it most do not hear their appeal. In the city of Chicago because of lack of birth registration previous to this year no one knew how many babies were born or how the mothers were attended during confinement. It is believed that in Chicago at least 50 per cent were attended by midwives and in New York City 42 per cent were attended by midwives last year. A large number of these midwives probably never heard of Crede's preventive treatment of ophthalmia neonatorum. Midwives are licensed by the state board of health, but the law provides for no inspection, so after securing their license they are lost sight of.

In Boston is carried on what is known as social service work. In this work convalescent patients and outpatients are investigated in regard to their financial, moral and physical status and aid given in the most effective way. During the year 1909 a nurse was employed whose duty it was to follow up all cases of ophthalmia neonatorum presented to the eye infirmary and report upon them. Of the 116 patients only ten were born in a hospital, 104 had been attended by physicians and two by midwives and later seen by an irregular physician; eighty-seven came out with good eyes, while the eyes of twenty-nine were disabled. Six lost both eyes, sixteen one eye; sixty-two of these children came from good homes.

In Boston an inquiry by social workers developed the fact that out of ninety-seven doctors (with reasonably large obstetrical practice) twenty-seven used a prophylactic, forty seldom did so and twenty-eight never used any preventive treatment for this disease.

To understand this disease it seems necessary for me to speak plainly, as to a medical audience. This disease is caused by a germ developed in the vaginal canal of the mother and transferred to the eyes of the baby during its birth. This germ is generally the gonococcus and the presence of the disease is usually considered as proof positive of immorality of one or both parents. Study of the disease and statistics go to prove that in two-thirds of all cases examined the gonococcus is found by microscopic examination. In the other third, however, the pneumococcus, staphylococcus and other germs are present. The severe cases are almost invariably caused by the gonorrheal infection.

There are at least two ways of approaching the problem: 1. That our boys and girls should be educated at an early period of their lives that they must live clean, moral lives throughout. There should be no double standard of morals. Your daughters should have husbands and your sons have wives that are not only free from venereal disease, but demand should be that they should never have had it. The lingering effects of the "sowing of wild oats" by young men and boys is the cause of many of these blind babies and oftentimes invalid mothers. This object to attain may be an ideal, but there is no reason why we should not strive for it.

2. That measures should be taken at birth to prevent the development of inflammation of the eyes. Microscopic examinations of the vaginal secretions of the mother before the birth of the child should be made; if germs are found likely to cause eye disease, antiseptic douches should be used to render the vaginal canal aseptic.

Medical measures will accomplish much, but I think a better understanding of the causes and nature of this disease will make treatment less often necessary. I know of no organization better able to grapple with this problem than the parent-teacher associations. They are able to reach the mothers who do not read the papers and magazines and may seldom employ physicians. A few words at the right time would make them ready for and willing to have the use of the preventive treatment, i. e. (the silver nitrate drops for the eyes, either five or ten grains to the ounce) and instead of objecting they would expect that treatment. All regularly educated physicians are taught in the medical schools how to care for these cases. Where there is any doubt about the matter time should not be lost, but someone known to be familiar with the best methods of treatment should see the patient as early as possible. Ophthalmic surgeons have been active in securing legislation requiring notification if this disease is present. The following states have laws upon this subject: Connecticut, Idaho, Maryland, Massachusetts, Michigan, Missouri, Ohio, Pennsylvania, Rhode Island, Texas, Wisconsin and Illinois.

In 1895 an act for the prevention of blindness was passed by Illinois legislature.

"Section 510. Be it enacted by the people of the state of Illinois represented in the general assembly.

"Should any midwife or nurse having charge of an infant in this state notice that one or both eyes of such infant are inflamed or reddened at any time within two weeks after its birth it should be the duty of such midwife or nurse having charge of such infant to report the fact in writing within six hours to the health officer or some legally qualified practitioner of medicine of the city, town or district in which the parents of the infant resides.

"Section 511. Penalty. Any failure to comply with this act shall be punishable by a fine not to exceed $100 or imprisonment, not to exceed six months, or both."

"Under the direction of a committee on ophthalmia neonatorum of the American Medical Association there is a strong and growing movement to fight the evil by concerted action of the various medical organizations and state boards of health. This committee in its report to the American Medical Association urged the necessity of more careful statistics as to the prevalence of the disease and a wider knowledge of its dangers. It advocates careful registration of births and midwives, education of midwives, mothers and the medical profession on the subject. It also advocates the preparation and distribution by health

boards of the remedy chosen as a preventive, with explicit directions for its use; and that state boards of health should be empowered to enforce laws enacted for the prevention of this disease, and even to make such rules, regulations and ordinances as they deem expedient to accomplish this object."

The views of this committee have been endorsed by various medical organizations, the American Health Association and the National Congress of Mothers. The campaign of education is now started in various states and they are doing especially good work in Massachusetts and New York. The New York Association for the Blind, which receives substantial support from the Russell Sage Foundation, is accomplishing results by means of its publications, public speaking and photograph exhibits. One of their publications entitled "Directions to Mothers, Midwives and Nurses for the Prevention of New-Born Babies' Sore Eyes," is a small tract, printed in five languages—English, Italian, German, Polish and Yiddish—and distributed by thousands where it is likely to do great good.

There is now formed a lay organization in this state for the prevention of blindness or conservation of vision. This association co-operates with the American Association for the Conservation of Vision. The purpose of this organzation is:

1. To collect and standardize existing information on all subjects pertaining to the use and care of the eyes.

2. To secure the investigation of subjects on which present knowledge is incomplete or contradictory.

3. To promulgate knowledge relating to the conservation of vision.

There are departments of legislation, publicity, statistics and information, industrial, educational and department of defects and diseases of the eye.

This society deserves and requests your co-operation and assistance in their endeavor to lessen the unnecessary and often tragic blindness that seems to be always with us.

THE SAFETY BLADE IN SURGERY.

From time to time during the past year there have appeared articles by certain public-spirited gentlemen exploiting the use of various devices with which the blade of a common safety razor may be converted into a scalpel.

While uncertain as to the advantage possessed by this cumbersome weapon over the finished product of the modern manufacturer of surgical instruments, we are an advocate of "Safety First," and fully realizing that great havoc may (and perhaps has been) done with the scalpel, we are for the blade.

The havoc wrought by the old time razor made the evolution of the "Safety" imperative. Since we are now awakening to the exigencies of the situation, may it not be that the profession will ultimately conceive the idea of a "Safety Scalpel." Speed the time.—Cheerful Contributor in *The Bulletin of the Vermilion County Medical Society.*

THE SIAMESE TWINS.

When the late P. T. Barnum was exhibiting his famous Siamese twins, they were, as is well remembered, a wonderful sensation.

A certain divine, accompanied by his daughter, was much interested, and their curiosity was unbounded. The young lady asked where the twins were born. Mr. Barnum told them that they were born in Siam.

"And are they brothers?" said the clerical gentleman.

"Oh, yes," said the world's greatest press agent.

"Well, well!" said the visitor. "Think of that, Mary! How good and kind a gracious Providence to allow them to be brothers; and not to have linked a pair of strangers together for life!"

And as the twain walked away, Mr. Barnum began to wonder if by any chance he had possibly overlooked any bets.

IN A BAD WAY.

They were talking automobile reminiscences, and Congressman Jacob Johnson of Utah recalled the experience of Smith along a country road.

The inexplicable thing had happened some ten miles from a garage, and Smith was mauling over the machine with a monkey wrench when a farmer came along.

For awhile Hiram stood in silence watching the efforts of the autoist, and then human nature asserted itself and he broke into conversation.

"Some car ye've got there, pard," he remarked admiringly. "What power is it?"

"Forty horsepower," answered Smith, continuing to plug away with the monkey wrench.

"Forty hoss, eh?" returned Hiram, still working his eyes. "What seems ter be the trouble with it?"

"Well, as near as I can figure it out," answered Smith, with a sort of cross between a sigh and a cuss, "about thirty-nine of the horses are dead."—*Philadelphia Telegraph.*

MODERN SURGERY.

"Take Child from Mother with Pistol."—*Chicago Journal.*

Great Cæsar!

—*B. L. T. in Chicago Tribune*

ILLINOIS MEDICAL JOURNAL

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MARCH, 1914.

Editorials

RELATION OF THE PHYSICIAN TO THE COMMUNITY.*

THE MINOR PREMISE.

Of all the occupations of men, there is but one—that of medicine—in which the training and experience of its exponents is concerned with the study of man himself. Medicine considers man in relation to himself, his neighbor, his state, the world and all things therein contained. There is no fact so trivial, no phenomenon so vast or obscure, but medicine gives thoughtful attention to its possible relation to man's well-being.

The study and practice of Medicine has come to be something more than the application of a variety of substances for the relief and cure of disease. The fog of mysticism in which it was imbedded and which entangled it with religion is beginning to lift. Though the fact is as yet unrecognized outside of a few dreamers, it has become in reality the "Study of Man and the Universe," its purpose the intelligent application of knowledge to the direction of human efforts for the welfare of man, individually and collectively. One of the marvels of the last fifty years is the ability of the medical profession to adapt and adopt for its own purposes information from all sources. Medicine is tending to become the application of science, and the physician the leading scientist. But Medicine differs from other forms of useful effort in one fundamental element. Whereas, other occupations are concerned with the study of men's needs and desires, and have as their purpose the satisfaction of such needs and desires, Medicine studies Man, himself, and its only consideration is the relation of the microcosm and macrocosm to Man, himself. In the final human judgment of values, the relation to Man, himself, of thing or fact or fancy must be the criterion.

That the physician should be the arbiter of all human activities seems to be the only logical conclusion left to draw. The physician teaches the sanitary engineer where to build his drain, and why; the constructing engineer how to build his house so that it may be for Man's good and not for his harm; the farmer how he can furnish to the city food that is safe; the city how it is wallowing in its own mire and suffocating in its own poisonous breath; the lawyer, that without justice, law is a bitter farce; that justice is essential to human progress; and the merchant, the manufacturer, the transporter, the employer, the laborer that the "rule of reason" and of justice must guide their conduct, or they and their kind will suffer more than benefit from their activities.

And all the "ologies" he marshals in array and each he interrogates, saying: "What bring *YOU* that I may use to benefit mankind? Whatever things you bring, until I can apply them, have interest, but not value."

THE CONCLUSION.

If, then, government is to exist among men to represent community effort for the betterment of our kind, the dominant intelligence and directing factor in such government must be that group whose attention has been engaged in the limitless study of man, himself, in all his relationships. It is our work, and it constitutes our opportunity. It is our logical part in the life of the community to point the way, to guide its footsteps, and, hoveringly, to lead on to the attainment of better things.

Government will continue to exist among men, and statistics will continue to show that (apparently at least) Government has been a suc-

*A continuation.

cess. That is to say, the figures show that the struggle for existence has been greatly ameliorated through organized effort; that the "average" wealth of the individual has increased; that famine has been eliminated; that the "average" life has been lengthened; and transportation and communication made possible beyond the dreams of savagery. But statistics do not show that under our system the few exploit the many; nor that among unskilled laborers existence is maintained by a struggle fiercer and more heart-rending than ever took place in the wilds of the jungle, nor that ignorance, squalor, filth and vice, when they appear in these present times, are due to "man's inhumanity to man"; nor that simple justice established between man and man would abolish poverty and rid the world of at least three-fourths of its present disease. When earnest and honest effort is made to establish thorough-going prevention of disease, it will be found that the same methods and measures that will prove effective for that purpose will at the same time establish justice among men, so intimately is human welfare based on health, related to justice among men. To prevent disease is a task invented by the physician, out of his sympathy for the suffering and sorrow that passes through his hands. Its value is beginning to be recognized by the community and is being taken over by the community. In this field lies the chief future value of medical activities, and this field can be filled by no community group other than the physician. This is distinctly and peculiarly our work. If in the course of doing this work we shall find that by the same means we have established among men a fairer and juster mode of life, we shall then have done what no other community group is fitted to do.

In order that any particular group in the community shall become "the dominant intelligence and directing factor" in that community or government, it does not follow that the members of that group should be recognized as officials, nor is it necessary that the group should receive official sanction. That physicians should lead and direct all human activities, does not mean that doctors should hold office. Whether they do or do not is of no consequence. What is necessary is that the medical profession shall compel the community to recognize its integrity, its singleness of purpose, its unselfish motive, its devotion to the common welfare, and its untiring, unceasing efforts to increase its store of knowledge and develop skill until an enlightened community shall constantly seek and heed medical advice in community matters.

As a specific illustration of the attitude of the non-medical mind toward all questions of supposed public importance, consider the present status of the subject "Eugenics." The subject is new—in the sense that it has reached the popular consciousness within the last four or five years. The term may be said to be euphonious, and the idea it represents, in imagination, rises to the zenith of perfection and extends to the horizon its latitude of potential. The press is filled with it. The dailies, the weeklies, the magazines, the quarterlies, the reviews, discuss it with earnestness and enthusiasm. It has caught the popular fancy to such a degree that future generations are likely to consider its present phase a manifestation of hysteria and classify it with the "Salem witchcraft" and the "Mississippi Bubble." No article is complete without mention of it; no author is up-to-date who does not refer to it; and it is "stuck" in here at the last moment before going to press. The establishment of an "Eugenical" program has ardent advocates and equally ardent antagonists, and the arguments they present so curiously intermingle that to analyze them and logically arrange them is an impossible proposition. Some say it should be done because thereby the superman could be produced; others that the maintenance of the superman would require virtual slavery of the mass, that the superman differs from the hog only in intelligence, and from the sponge only in locomotive ability. Some say that such a plan would destroy the family and is therefore bad; others that it is good for the same reason. Some say that we could breed a race of physically perfect people; others that it could be only at the expense of mentality; some that we could produce a race of men and women mentally "superior." others that such people could not maintain themselves, and do not propagate with sufficient freedom. Elimination of defectives and undesirables seems to be advocated by most, but there are those who claim that the community has no right to interfere with mating, yet even these assert the right of the community to protect itself. Across

the confusion of words comes the clear, steady tone of the thinking physician, saying: "Wait; let us see first if we can determine where lies happiness for man. Let us see whether or not we can decide what it is we wish to do. Let us study all phases of this question in a strictly scientific manner, and meanwhile let us try to educate the community to use its common sense for the common betterment." And when this problem is solved, if it ever is, it must be by the physician. Had the physician been consulted in its construction, the present system of education would not have been fundamentally wrong.

(To be continued.)

GET A NEW MEMBER.

How much time or service does the average doctor give to the county or state medical society?

Notwithstanding the prediction that the membership of the State Society would decrease this year, it has increased, and it is hoped by the time of the annual meeting there will be still more gain. This is encouraging, but the fact remains that too many eligible physicians are not members of the State Society nor of the A. M. A. There is no good reason why every eligible physician residing in the state is not a member of both these societies.

The one real reason for this condition is the fact that the average physician is willing to pay his society dues for the year, and thinks he has done his full duty by the society. He is not willing to give the society any of his time.

It is a very small matter for most members to solicit and obtain an application for membership in the society from a neighboring physician, but instead of making that effort, the average member leaves this to the officers of the society, and wonders why there are so many eligible physicians who are not members. The officers of the societies usually are not acquainted with your neighbor, and your neighbor, when approached by an entire stranger, does not fill out an application so willingly.

This disinterestedness is mostly thoughtlessness or carelessness, but the fact remains that it is not fair to your medical societies, nor is it fair to the officers of the society, and most unfair to the member himself. After a while it will reach your pocketbook.

A medical society can never reach the maximum of efficiency until a complete organization exists. Legislators, when asked to support a medical bill, repeatedly refer to the fact that the medical profession is not organized.

We must remember, too, that each year the medico-legal expense is larger. There are many times more cases suing for malpractice now than when the service was inaugurated. This all means added expense, but, most of all, it means that we are not maintaining the best means of defense we have, namely, a complete organization. When every eligible physician is a member of a live society, there will be fewer malpractice cases.

It is up to you, doctor, to help increase the efficiency of your medical societies—county, state and national—and if you will take but a small amount of time, your societies will soon know the result of your efforts.

We can hardly expect to become effective, as a society, in legislative work until the entire profession is organized. Neither can we become most effective with the state executive nor with the appointed medical boards of the state until the profession is completely organized. The governor of a state is elected, and the medical boards are appointed to serve the whole people. If the whole medical profession wants a certain legislation, the probability is it would get it; but if half the profession wants that law, and the other half are inactive, the probability is the law will not be enacted. The individual member should work for the society, and he should see that his neighbor is a member.

We think your medical society is giving you more for your money than any other money you spend, and in return you should give your society some thought and some effort, and one of the ways you have of helping your society is by securing an application for membership from that doctor who is not a member.

ACID-INTOXICATION.

Acid-Intoxication and acidosis are terms that are applied to conditions of acidity observed in many patients under varying conditions. In childhood, particularly, this symptom complex is met with in several distinct clinical entities.

In the condition described in the older textbooks as cyclic vomiting, recurrent vomiting, ner-

vous vomiting, there is usually described this form. Again in the digestive disturbances of early life the condition is very frequently seen, especially where the sugars or fat are at fault. At this season of the year, when epidemics of sore throat prevail, acidosis is seen in a very considerable proportion of such cases.

The relationship between tonsilitis and rheumatism has long been recognized by many medical writers. It has remained for a few men, such as W. Gilman Thompson in this country, and Dr. Goodall in England, to point out a relationship between rheumatism and diabetes.

While it is yet too early to show that in the throat cases which develop this syndrome, there is any preponderance of the diplococcus of rheumatism (Payne and Poynton) the evidence is in favor of such conclusion.

In these tonsillitis cases, of which there has been such a very large number during the past few weeks, we are face to face with typical rheumatism as found in early life, and also a condition simulating diabetes in many of its aspects. In all of these cases acetone and diacetic acid are found in the urine, and a strong odor of acetone is given off in the breath.

The cases are undoubtedly infectious, and all those who come in close contact with the patient are affected usually, regardless of the age of the individual.

The throat manifestations apparently bear no direct relationship to the amount of acidosis nor to the length of the attack. Generally speaking, those patients giving a history of chronic digestive disorders or mal-nutrition are the more profoundly intoxicated.

The acid intoxication usually manifests itself about the third or fourth day of the disease. The patients are apathetic, anorexia is marked, nausea is practically always complained of, and in a large percentage of the cases recurrent vomiting is noted. This physiologic vomiting persists after the stomach is emptied, and even the smallest quantity of water is returned. The temperature range is from 101 to 103. The pulse is rather slow as compared to the usual temperature-pulse ratio. The bowels are constipated and the abdomen usually retracted; this with the increasing apathy may stimulate meningitis to a considerable extent. The apathy progresses to sopor, and in patients going on to a fatal termination, coma occurs twelve to twenty-four hours before death.

As the acidosis progresses, prostration becomes more and more marked; there is rapid loss of weight, and an early disturbance of respiration, with marked symptoms of air hunger, as manifested by the play of the alae nasi.

The use of bicarbonate and citrate of soda in large doses is indicated. The use of salicylates should be carefully guarded as acidosis is the symptom of salicylic acid poisoning. Other therapeutic measures may be needed in individual cases. Flushing out the bowels by high colonic enemas has proven of value in individual cases.

The diet that has proven best suited to this group of cases is skimmed milk or buttermilk.

PASTEURIZATION OF MILK.

The question of the advantages and disadvantages of the pasteurization of cow's milk in relation to its value as a food for infants has been discussed from both the clinical and laboratory points of view over and over again. In the main the clinicians have maintained that a clean fresh raw cow's milk was to be preferred while the laboratory worker with equal zeal has upheld the theory of pasteurization.

In a paper presented before the Academy of Medicine, Nov. 13, 1913, entitled the "Bacteriological Diagnosis and Treatment of Alimentary Disease in the Infant and Child," Dr. Ralph Vincent, Senior Physician and Director of the Research Laboratory, the Infant's Hospital, London, England, reported the results of his investigations both from the clinical and laboratory findings.

Few men are so fortunately situated as Dr. Vincent, having at command a thoroughly equipped laboratory in conjunction with an abundance of clinical material furnished by the Infant's Hospital.

Dr. Vincent classifies the bacteria commonly found in milk according to the conditions determining their growth in and their action on milk.

1. *Bacteria producing lactic acid but not producing gas.* This group is represented by the Streptococcus lacticus and the Bacillus lacticus.

The Streptococcus lacticus is the typical organism growing in pure milk at 38 C. At a later stage when the acidity has become too great

for the streptococcus, the Bacillus lacticus appears, for this organism is exceptionally tolerant of acid.

2. *Bacteria producing lactic acid, carbon dioxid and alcohol.* This group embraces the whole of the colon organisms and includes the Bacillus acidi lactici (Hueppe) Bacterium acidi lactici (Esten) Bacillus lactis aërogenes (Escherich) and the Bacillus coli communis. When pure raw milk is incubated the growth of the organisms belonging to this group is inhibited by the growth of the organisms belonging to the first group. When milk is grossly contaminated by colon organisms these may acquire dominance, and in such cases the curdled milk shows evidence of gas production.

3. *Bacteria growing in "pasteurized" milk,* that is, milk that has been subjected to a temperature between 65 C and 100 C. The Bacillus putrificus and the Bacillus aerogenes capsulatus are examples of this group and their products are of a highly irritant and dangerous character.

4. *Bacteria growing in milk after it has been raised to 100 C,* owing to the fact that their spores are not destroyed. These organisms are found in milk that has been boiled or "sterilized" and in condensed milk. This group embraces a large number of organisms, the chief representatives being the Bacillus subtilis, the Bacillus mesentericus and the Bacillus mesentericus vulgatus. When they develop in the intestine extremely powerful poisons of an alkaloidal character are created and the absorption of these poisons produces profound coma and death.

These organisms are quite unable to grow in raw milk, for their growth is entirely prevented by the acid forming bacteria. The bacillus proteus vulgaris is a powerful putrefactive organism, but it does not belong to this group, as it does not possess spores.

Recently "pasteurization" has been advocated at an exceptionally low temperature, 60 C. (140° F.), for twenty minutes, and this Dr. Vincent carried out in a series of investigations to determine the effects of "pasteurization" at this temperature. He summarizes his results thus:

The lactic organisms were not destroyed, as they finally appeared after long incubation in all cases. But they were so greatly injured that in the great majority of the experiments they failed to appear at all in twenty-four hours, while the effect of their being unable to develop is shown by the organisms which actually developed during this period.

These included the Bacillus megatherium, the Bacillus subtilis, the Bacillus mesentericus and the Bacillus aerogenes capsulatus. The uncertain effect of the "pasteurization" at this temperature is shown by this list, for it is generally possible to specify the organism that will appear, given the temperature and the period of exposure. The uncertainty is in this instance not surprising, as the employment of such low temperature is in reality an endeavor to obtain the impossible—that is, a method of pasteurization which shall certainly destroy pathogenic organisms without destroying the lactic organisms.

The grave alteration of the milk is shown in the development of acidity and the time of curdling. Fresh milk always curdles at 38 C. within twenty-four hours. It generally curdles in about eighteen hours, the acidity being about 60 to 70 degrees. In the pasteurized milk the average time of curdling was fifty-five hours, while the average acidity at the end of twenty-four hours incubation was 20 degrees, which is only very slightly above the acidity of milk at the time of milking. (Pasteurized milk immediately after pasteurization almost invariably shows a slightly higher acidity than the raw milk immediately before it is heated.)

In pure milk the Streptococcus lacticus is the predominant organism. If the milk is contaminated the growth of the streptococcus is interfered with, and colon organisms develop at an early stage with the result that the curd is pitted, while if the gas production is excessive the curd may be brought to the surface of the milk.

Milk is always acid at the time of milking. The initial acidity varies from 15 to 18 degrees. The development of acidity is due entirely to the action of micro-organisms and consequently the temperature at which milk is kept and the time of exposure are the chief factors determining the rate at which acid is produced. The production of acid does not proceed regularly. A remarkable feature connected with the development of the streptococcus is that there are two stages in its growth: 1. A stage lasting for from eight to twelve hours in which the production of acid is very slight; 2, a second stage of about twelve hours in which there is rapid production of acid.

With regard to the term "putrefaction" it is well to point out that the term is used in the present connection as a synonym for proteolysis. The production of evil-smelling products is an incident to putrefaction; some organisms give rise to products with most unpleasant odor, others, notably the bacillus mesentericus vulgatus, grow in profusion without creating any change that can be detected by sight, taste or smell. Indeed it is one of the dangers of "pasteurized" milk that the milk may be loaded with organisms of this character without there being any obvious change to suggest that the milk is not wholesome.

Correspondence

WHY NOT TELL THE TRUTH?

To the Editor: The following open letter to the trustees of the American Medical Association was sent to the editor and general manager Nov. 25, 1913. The editor wrote me that he would send copies to each trustee with a recommendation that it be published in the *Journal of the A. M. A.* A few hours later I received another letter from him, in which he said he "had changed his mind" and would not put in any recommendation to publish. No mention has been made of the matter by the editor or the trustees since that time. Therefore, believing that he does not intend to publish my letter to the trustees, I ask you to publish it for the benefit of the members of the Illinois State Medical Society.

Yours fraternally,

HENRY F. LEWIS.

AN OPEN LETTER TO THE TRUSTEES OF THE AMERICAN MEDICAL ASSOCIATION.

Gentlemen: As a member and well wisher of the Association, I note with pleasure that the trustees have at last made some sort of answer to the criticisms which have been made, and honestly made, of the management of the Association for some years past. An increasing number of the friends of the A. M. A. have been asking each other why the authorities have so long ignored the insurgent movement in the Association and the complaints among so many of its members regarding its administration. They naturally have supposed that the Association did not belong solely to any executive officer, nor indeed to the trustees, but that every member had equal interest in it and was entitled to some voice in its councils. The *Journal A. M. A.* has never given a chance to members to voice any complaints nor to criticize ever so mildly the actions of those in power. It is gratifying to find that an answer to at least some of these criticisms, which have perforce been published elsewhere, has finally appeared in the *Journal.* However, friends of the A. M. A. will be pained to observe that this answer, published on page 1920 of the *Journal* of the American Medical Association for Nov. 22, 1913, over the signatures of the chairman and secretary of the trustees, falls far short of being a fair-minded statement of facts which members ought to know.

In this statement by the trustees the impression is given that they are hiding behind some very flimsy technicalities. I will ask you, gentlemen, why you do not publish the text of the decision of the Appellate Court of Illinois, or at least such a fair abstract as appeared in ILLINOIS MEDICAL JOURNAL for November, 1913, page 301? Is it possible that, looking down from your inaccessible intellectual heights, you view the ordinary member of the Association and the reader of *our Journal* as incompetent to comprehend the text of this legal decision at first hand?

Evidently you were not advised by your eminent and learned counsel when you state that Dr. Lydston and his attorney "endeavored to induce the state's attorney of Cook County to file a petition for a *mandamus* against the trustees of the Association, claiming that they were illegally elected." The facts are that the plaintiff's attorney requested the former state's attorney, J. E. W. Wayman, to serve writs of *quo warranto* upon the trustees, demanding that they should show whether their operations were legal. This the state's attorney refused to do, and the subsequent proceedings were to get the courts to *mandamus* him to do his duty in the premises.

The text of the decision, which you have failed to publish, shows distinctly that the Appellate Court does go into the merits of the case as affecting the American Medical Association.

For instance, the court says, in relation to holding meetings of the Association outside the state of Illinois: "We think that the words, 'at such places as may be provided by the by-laws,' must be construed to refer to places *within the state.*" "Here it does not clearly appear from the language used in Section 32 or elsewhere in the corporation act that corporations not for profit are given the power claimed in this case to hold corporate meetings outside of the state of Illinois, nor does it clearly appear that the power is anywhere given to take from the members, by means of by-laws, the right to vote 'in person or by proxy' for trustees, and vest that right in delegates selected by its constituent associations. We, therefore, must conclude that the powers claimed have never been granted to and are not possessed by the association in question." If such a decision (and the quotations are only a small part of it) "does not in any way affect the American Medical Association," what would affect it?

I would like to ask you, gentlemen, a few more questions. Is there not, regardless of the merits of the issue, serious question as to the legality of the corporate acts of the Association, in spite of the opinion of your eminent legal counsel?

What about the illegal votes of thousands of non-members (really an illegal majority vote)? How does this affect your legality?

Who has paid the expenses of the extra counsel who have tried the case in question in the various courts during the last few years? Has the state's attorney of Cook County personally or the County Treasurer officially paid the bills? Has the A. M. A. paid the attorney's fees and court costs of this prolonged legal struggle? Who will pay the expenses of the appeal to the Supreme Court? Who are the attorneys who are fighting for the trustees? Are they employes of the state's attorney's office? It would seem that the members of the Association ought to know.

Why has there been so strong a fight merely to prevent a hearing and decision on legal questions which vitally involve the A. M. A.? Why have the trustees not welcomed the first opportunity of settling such questions? It is the pettiest kind of quibbling to state that the question involves only the state's attorney of Cook County and not the Association. The state's attorney probably does not care two cents about the case and is really not making this legal fight. Why has not the Association long ago brought this question to settlement, if the trustees are so certain that Lydston is wrong? Why did not the trustees submit to the demand for *quo warranto* and show cause why their proceedings were perfectly legal, if they were so certainly sure?

The *Journal of the American Medical Editors' Association* for November, 1913, publishes the complete text of the decision, with editorial comments thereon. Is the *Journal* of the American Medical Association less interested than the independent journals?

Why not take the members of the American Medical Association into your confidence, officers of the A. M. A.?

(Signed) HENRY F. LEWIS.

Chicago, Nov. 25, 1913.

TWELFTH INTERNATIONAL CONGRESS OF OPHTHALMOLOGY.

St. Louis, Mo.

To the Editor: Will you kindly see that the enclosed notice of the twelfth International Congress of Ophthalmology to be held in St. Petersburg from the 28th of July to August 2, 1914, of our calendar (10th of August to the 15th of August, Russian calendar) will reach those members of your State Association who may be interested.

Some of the trans-Atlantic steamship companies offer special rates for this occasion. It is to be hoped that the attendance from America will be greater than usual. These circulars were left in my hands some time ago for distribution.

Yours truly,

W. H. LUEDDE,

Member Corresponding Committee.

The circular referred to announces that authors should express their views in French, though all European languages will be official. Physicians intending to participate should communicate with the corresponding members: Drs. A. Knapp, New York; Edmond Blaaw, Buffalo; G. E. de Schweinitz, Philadelphia; Adolph Barkau, San Francisco; W. H. Luedde, St. Louis.

ALL DRESSED UP AND NO PLACE TO GO.

ORDINANCE FOR THE REGULATION OF HORNS
ORDINANCE PROVIDING FOR THE USE OF "COW-CATCHERS"
ORDINANCE FOR THE REGULATION OF THE MANUFACTURE OF MOTORS
ORDINANCE FOR THE REGULATION OF AUTOMOBILE LAMPS
LICENSE NUMBER REGULATION
ORDINANCE FOR THE REGULATION OF MOTOR OIL AND GASOLINE
NEW CAR

—Courtesy Chicago Daily Tribune.

Auto Sparks and Kicks

NON-FREEZING SOLUTIONS FOR USE IN THE COOLING SYSTEM DURING THE WINTER.

Unless it is absolutely certain that the car will be housed in a heated room or building at all times that the motor is stopped during freezing weather, it is necessary that some ingredient be added to the water of the cooling system in order to prevent it from freezing and consequently burst the radiator, cylinder, water jacket or some other portion of the cooling system. Table I gives the freezing points of the several solutions generally used in different proportions.

The ingredients named in this table are the most generally used. There is a number of other solutions which will lower the freezing point of water, but they are either too expensive, injurious to the parts of the cooling system, will not flow properly or do not take on and lose heat rapidly enough.

The following paragraphs give briefly the advantages and disadvantages of each of the substances generally used.

TABLE I.

Material	Amount in fluid ounces to be added to one gallon of water									
	10	20	30	40	50	60	70	80	90	100
	Freezing Point									
Glycerine	29	28	21	17	13	9	6	0	-4	-8
Ethyl or Grain Alcohol (denatured)	27	22	18	13	8	4	0	-6	-10	-14
Methyl or Wood Alcohol	25	19	12	5	-5	-18	..	..	..	..
Calcium Chloride (ounces)	27	21	15	5	-10	-38	..	..	..	..
Half Wood Alcohol Half Glycerine	25	15	-13	..	..	..	..	..	..	..

ETHYL OR GRAIN ALCOHOL (DENATURED)

This alcohol is not quite so volatile as wood alcohol, that is, it does not evaporate so easily or quickly, hence it does not have to be replaced as often. On the other hand, for the same percentage solution, it does not lower the freezing point as much as wood alcohol. On the whole, however, if the freezing point is not to be so low, it is preferable to wood alcohol.

Table of Specific Gravities of Alcoholic Solutions.

TABLE II.

Sp. Gr.	1.00	.99	.98	.97	.96	.95	.94	.93	.92
Pct Cent Denatured Alcohol	0	7½	15½	23	30	38	46	53	60
Per Cent Wood Alcohol	0	8	17	25	33	41½	49	57½	66

METHYL OR WOOD ALCOHOL

Wood alcohol produces a lower temperature, for the quantity added to the water, than any of the substances, except calcium chloride. Great care should be taken, however, to test the strength of the solution, as wood alcohol has a low boiling point, and evaporates rapidly. The sense of smell should not be relied on, as even a very weak solution will, especially when warm, give off a very strong odor.

If alcohol solutions are used, either wood or denatured, a hydrometer should be used daily during cold weather to test the strength. A per-

centage table with specific gravities usually accompanies the hydrometer. Table III gives the percentages of the two alcoholic solutions with corresponding specific gravities.

ALCOHOL AND GLYCERINE.

Either of the alcohols may be used in conjunction with glycerine and this probably makes the best anti-freezing solution of any. Table I shows only the freezing points of the wood alcohol-glycerine solutions. The denatured alcohol-glycerine freezing points are considerably higher. It should be noted about this solution, however, that there is no practical method to telling how much alcohol the solution contains, as a hydrometer is useless unless calibrated for a particular percentage of glycerine. The only thing to do therefore is to add small quantities of alcohol each day and get an approximate solution. The glycerine does not evaporate, hence does not have to be replaced.

GLYCERINE.

Glycerine, when used by itself, must be pretty strong in order to produce the desired result. When it is strong enough for this purpose, it is also strong enough to attack the rubber in the hose connections and for this reason it is far preferable to use the alcohol with it and reduce the proportion of glycerine. In using a glycerine solution, it is necessary to thoroughly cleanse the radiator and water jackets of any residue of crystals from calcium solutions previously used, as this residue will thicken and cloud the glycerine solution. A very strong glycerine solution becomes gelatinous and will not circulate freely, especially in thermo-syphon systems, where its use is not recommended. One advantage about a glycerine solution is that when it does freeze, it does not freeze solid, but becomes a sort of spongy mush which does not do much damage.

CALCIUM CHLORIDE.

Calcium chloride is a very effective cooling agent, but unless the chemically pure article is used there is danger of corrosion of the metal with which it comes in contact. A convenient way to prepare the solution is to first make a "saturated solution" of the calcium chloride and water, that is, mix with a quantity of water warmed to 60 degrees F. all the calcium chloride the water will completely dissolve, and use equal parts of this saturated solution and pure water in the cooling system of the motor. If chemically pure calcium chloride is used no trouble will result. Chloride of lime (CaOC12 should be avoided. Crude calcium chloride retails at about 8 cents or 10 cents a pound, while the chemically pure article is worth about 25 cents in small quantities. If the chemically pure article cannot be obtained, the commercial substance can be made fit for use by neutralizing the acid. This may be done by adding ammonia or soda ash gradually to the solution until the blue litmus paper no longer turns red when moistened with the solution.

SALT.

Sodium chloride or ordinary salt may be used as an anti-freezing agent. A saturated solution —that is, a solution in which the water has dissolved all the salt it can—will freeze at about 0 degree. The disadvantages about a saline or salt solution is that it has an electrolytic action on the brass and iron parts of the cooling system.—*Trade Journal.*

Society Proceedings

Secretaries are requested to have their proceedings typewritten, double spaced, and in the hands of the Managing Editor before the 20th of the month to insure early publication. The place and date of meetings should always be stated.

ADAMS COUNTY.

Regular Meeting, Jan. 12, 1914.

Adams County Medical Society met in regular monthly session on Monday, January 12th, 1914, with the newly elected president, Dr. Kirk Shango, in the chair.

After the reading of the minutes of the last meeting, a committee consisting of Drs. Pittman, C. R. Bates and W. S. Knapheide, was appointed to draw up resolutions on the death of Dr. L. R. Whray of Golden. Dr. Whray was one of the oldest practitioners in the state, and had been a member of this society since 1906. It was moved and seconded that a memorial page be set aside in our records and a copy of the resolutions sent to the family.

A discussion followed regarding the change of our meeting day, and as it was impossible to decide on a day, it was voted that the secretary secure post cards and mail them to the members with the February Bulletin.

It was moved and seconded that the program committee set aside a certain day and announce that day as the one on which the business end of medical

practice will be discussed, after which the society adjourned for luncheon at Hotel Quincy.

In the afternoon session a vote was taken on application of Dr. G. F. Gossard of Loraine, who was elected to membership.

The scientific program was opened by Dr. R. J. Christie, who gave a very interesting and detailed report of the meeting of the North American Surgeons in Chicago last November.

Dr. C. D. Center, councillor for the sixth district, addressed the society on "Medical Organization." His talk was very brief but to the point and brought forth numerous discussions and questions. After this the meeting adjourned.

ELIZABETH B. BALL, *Sec'y.*

Regular Meeting, Feb. 9, 1914.

The Adams County Medical Society met in regular monthly session on Monday, February 9, 1914, at the Chamber of Commerce rooms, Quincy, Ill. Luncheon was enjoyed by about fifteen members at the Hotel Newcomb.

At the business session in the morning a set of resolutions on the death of Dr. L. R. Whray of Golden were read, accepted and a memorial page set aside in the records; also a copy ordered to be sent to the family. Dr. Whray was one of the pioneer physicians of Adams county. A man absolutely ethical in his profession, esteemed and respected by his friends and associates. By his death the Adams County Medical Society has lost an excellent member and a good friend.

Dr. T. B. Knox, president of the Adams County Anti-Tuberculosis Society, addressed those present in regard to the anti-tuberculosis movement in Adams county. He asked for the co-operation of the members in the various undertakings and measures connected with this new movement. A resolution was passed endorsing the movement and offering the assistance of the society in any way that it could be helpful. A number took out memberships in the Anti-Tuberculosis Society.

Our guest on this occasion was Dr. Francis Reder of St. Louis, who read a carefully prepared paper on "The More Serious Phases of Intestinal Stasis." He showed a number of beautifully illustrated charts and also some fine specimens. A discussion followed, which was led by Drs. Christie, Center and Stine. Each one present felt deeply grateful to Dr. Reder and expressed the wish that he would visit us again in the near future. He was unanimously elected to honorary membership in our society.

The meeting then adjourned.

ELIZABETH B. BALL, *Sec'y.*

COOK COUNTY.

CHICAGO MEDICAL SOCIETY.

Regular Meeting, Jan. 28, 1914.

Contagious Hospitals.

1. The Need of Contagious Hospitals for All Classes of Patients in This City. Martin M. Ritter, Chairman Propaganda Committee.

2. The Methods of Spread of Contagious Diseases. J. O. Cobb, Assistant Surgeon General U. S. Public Health Service.

3. Quarantine in Contagious Diseases; Common Sense and a Study of Human Nature Necessary to Be Effective. P. J. H. Farrell, Major, Sanitary Corps, U. S. Army, Philippine Islands, 1898-1901.

4. The Consideration of Contagious Diseases from the Standpoint of the State Board of Health. J. A. Robison, President State Board of Health of Illinois. Discussion: A. C. Cotton; Edna Foley, R. N., Superintendent Vivising Nurse Association; Julius Hess.

Regular Meeting, Feb. 4, 1914.

Canadian Night.

Eight Years' Experience with Graves' Disease. Geo. A. Bingham, Professor Clinical Surgery and Clinical Anatomy, University of Toronto, Toronto, Canada.

Discussion—Heart, Arthur R. Elliott; Eye, J. B. Loring; Surgical Treatment, A. E. Halstead; Serum Treatment, Orville McMichael.

Joint Clinical Meeting Between the Chicago Medical Society, the Stock Yards and Englewood Branches at the Stock Yards Inn, Feb. 11, 1914.

Stock Yards Branch.

Medical Cases. I. Clark Gary, R. S. Love and J. F. Hultgen.

Skin Cases. K. A. Zurawski.

Surgical Cases. W. S. Hector, W. J. Hurley, W. L. Porterfield and H. Hofman.

Discussion—Geo. Glaser, C. F. Friend, T. J. Sullivan and R. Haley.

Englewood Branch.

Presentation of cases as arranged by Carl Langer.

Regular Meeting, Feb. 18, 1914.

1. Rheumatism. Alex F. Stevenson, Jr.

2. The Internal Administration of Radium in Chronic Rheumatism. Wr. H. Cameron, Pittsburgh, Pa.

3. Observations on the Diagnosis and Treatment of Rheumatism and Allied Diseases. Geo. Butler, Mudlavia.

4. Serum Treatment. E. R. Larned, Detroit, Mich.

Discusion—H. W. Gentles and W. M. Thompson.

ENGLEWOOD BRANCH, CHICAGO MEDICAL SOCIETY.

Thirteenth Annual Banquet and Ladies' Night, Jan. 21, 1914.

The thirteenth annual banquet and ladies' night of the Englewood Branch is now a matter of history and has been justly recorded as a most brilliant success. Its memory, however, will linger long in the minds of those who were present. Progression is the watch word of Englewood, and while last year's banquet was a huge success it wore the laurels only one short year. The thirteenth annual (who said thirteen was unlucky), now holds the honor so graciously and unan-

imously conferred upon it by the 236 who were present.

To the banquet committee, composed of Drs. J. W. McGuire, chairman, Rupert M. Parker, J. A. Waska and A. C. Kleutgen, great credit is due.

To them the satisfaction of having "put over" a most brilliant success is ample reward for their hard labor. To each and every one who was present we extend our sincere thanks and appreciation, realizing that without their help success would have been impossible.

Great credit is due Mr. John A. Hill of the Stock Yards Inn, for the able and efficient manner in which he handled the large crowd. The service was all that could be asked, the food the very best and served to the "Queen's taste." Also in the matter of stage erection and the many other little things, Mr. Hill proved himself most willing and obliging. His object seemed to be to please, to give more than he had promised. That delightful and refreshing frappe served after the banquet and show, and so greatly enjoyed by all, was given, unsolicited and free of charge, by Mr. Hill. Your efforts to please, Mr. Hill, were highly successful and we thank you and herewith express our appreciation.

During the banquet feast, and while partaking of Mr. Hill's delicious and appetizing food, the orchestra played sweet strains of music and Mr. John M. Forsythe sang some popular (perhaps unpopular) songs. After having thus satisfied the "inner man" the assembled crowd was invited to adjourn to the large ball room where a stage had been erected for the presentation of L'Amour Medecin (Love's the best Doctor), by Moliére.

CHARACTERS IN L'AMOUR MEDECIN (LOVE'S THE BEST DOCTOR) BY MOLIERE, AS PRESENTED AT THE THIRTEENTH ANNUAL BANQUET AND LADIES NIGHT OF THE ENGLEWOOD BRANCH, CHICAGO MEDICAL SOCIETY.

Just before the great play started Dr. A. T. Webber favored us with a cornet solo, this coming in the nature of a surprise. He was loudly encored after his selection from "The Palms," and responded with "When It's Apple Blossom Time in Normandy." His playing was beautiful and greatly enjoyed by all.

The curtain is up and the great show is on. Would that time and space permitted a detailed account and that adequate words could be found to justly describe its great success. The presentation of this play was an undertaking unprecedented in the annals of medical banquets. Each and every person connected there-

with deserves great credit and praise. To Dr. Rupert M. Parker the greatest credit is due for suggesting and working up this play as presented. His work may be likened unto the foundation of a beautiful home, the superstructure resting and depending entirely upon the foundation. To Dr. J. A. Waska we must credit the beauty of the superstructure—the successful acting of the various members being made possible through the ardent and untiring efforts of this competent actor and stage manager. However both Parker's and Waska's efforts would have proven futile had any member of this, now famous, company evidenced any shortcoming at all. Each and every member was a star. There was not a weak point anywhere. Waska, as Sganarelle, proved himself a past master in the art of acting. Mrs. P. C. W. Johannes, as Lisette, could not have been improved upon. Miss Veronica M. Cronin, as Lucinde, took her part extremely well, and as Sganarelle's beautiful daughter was a complete success. M. L. Mendel and P. C. W. Johannes as M. Tonis and M. Des Fonandres were as good as they make them and took their parts to the satisfaction of all. G. Henry Mundt, as M. Macroton, and C. Hubart Lovewell, as M. Bahys, proved a pair hard to beat. Lovewell was so well adapted to the part of the quick and witty M. Bahys and Mundt to the slow talking M. Macroton. These four consulting physicians could not have done better, but for Macroton's inimitable cough may we deign to prescribe "some small anodyne." W. H. Abbott, as Clitandre (Lucinda's lover) was extremely fine and proved himself some lover. He was beloved by all, for, as you know, "all the world loves a lover." Parker, as the Notary, took his part with all the dignity of a notary of the seveneenth century.

The play was a "howling success" and to each and every one taking part we extend our thanks and our appreciation. Your hard work and untiring efforts were crowned by signal success, appreciated and praised by all.

The banquet was undoubtedly the best ever, for which we must give due credit to our hustling chairman, Dr. J. W. McGuire.

The whole affair, the united efforts of all, serves as the expression of the esteem and affection in which our genial president, Dr. Julius H. Hess, is held by the Englewood branch. We were also singularly honored by the presence of several distinguished guests, among which may be mentioned Dr. C. P. Caldwell, president of the Chicago Medical Society; Dr. J. C. Hepburn, president of the stock yard branch; Dr. Martin M. Ritter, president of the north shore branch; Dr. Paul E. Kelly, president of the northwest suburban branch, and others.

Immediately after the show the room was cleared and dancing was in order. Everybody had a good time, everybody was happy, and everybody carried away pleasant recollections of the thirteenth annual banquet and ladies' night of the Englewood branch.

ENGLEWOOD BRANCH, CHICAGO MEDICAL SOCIETY.

Regular Meeting, Ferbuary 3, 1914.

The February meeting of the Englewood branch was held Tuesday evening, February 3, at the Englewood Hospital. The meeting was called to order shortly after nine o'clock and the following scientific program presented:

Edema .....C. Hubart Lovewell
Anaphylaxis.....Arthur I. Kendall

Dr. Lovewell's paper was exceedingly well written and gave a wealth of practical points concerning edema. In a concise yet thorough manner he covered his subject.

Dr. Arthur I. Kendall then spoke on the subject of anaphylaxis and a more lucid, interesting and valuable exposition of a difficult scientific subject it has not been my pleasure to hear. He clearly explained what was meant by anaphylaxis and beautifully described the mechanism. He spoke of the various idiosyncrasies, stating that most were true anaphylactic phenomena. Likewise the various bacterial infections were anaphylactic. That in typhoid the germ is taken into the body as the alien proteid; that the first two weeks, corresponding to the period of incubation, the germ remains unbroken. Then the germ becomes broken, the so-called poisonous central substance is liberated and we have the symptoms of anaphylactic shock. He spoke at length on diphtheria antitoxin and gave many valuable points, stating that sudden death is not due to antitoxin, but to the horse serum, and that the victim in many cases is found to belong to the "status lymphaticus" or "asthmatic" group.

He spoke of the practical side of anaphylaxis, explaining its use in diagnosis, as in hay fever, tuberculosis, syphilis, glanders, etc. To ascertain whether a given patient possesses any hypersensitiveness and to guard against severe anaphylactic reaction he advises that a very small amount of serum be given, then waiting for half an hour, and, if no reaction, the injection may be completed with safety. All in all, his talk was very instructive and highly entertaining.

The discussion was opened by Dr. H. Gideon Wells, who complimented Dr. Lovewell on the concise presentation of his subject and gave Fisher's theory concerning the etiology and treatment of edema, stating that whatever the fate of Fisher's theory, he must be given credit for his great work on colloids and their affinity for water. He spoke of the scientific progress and the part played by instruments of precision; the exactness of the thermometer, blood pressure apparatus, etc. He then described one of the latest instruments of precision, the elastometer, an instrument to measure the exact degree of edema. He stated that with this instrument it is possible to detect and measure the degree of edema in cases where the usual methods fail to show any, such as in cases of pleurisy, by placing it over the chest wall

or in cases of meningitis by placing it over the scalp. The description of this instrument was extremely interesting.

In speaking of anaphylaxis he stated that he felt very proud of the great work Americans as Vaughn, Rosenow and others had done on this important subject, and that to American men the greatest credit was due. He then spoke most instructively on the practical side of anaphylaxis, giving interesting laboratory experiments to show their value in obtaining definite information for practical use. To illustrate: It was sought to determine why asthmatics reacted more and to ascertain what would prevent or reduce this reaction. Experiments showed that guinea pigs died from bronchial spasm—muscular choke; also that the injection of atropin and adnephrin would reduce this reaction. Likewise in the experiments to determine the cause of sudden death it was found that when the foreign proteid—the serum—was injected intravenously in an animal previously sensitized, death would quickly follow. This leads to the conclusion that when death from the use of serum occurs suddenly it has accidentally been injected direct into the blood stream of a patient already hypersensitive. These two factors must be present. He spoke of the relation of infectious diseases, of how the growth of the germs, such as typhoid and tuberculosis, represented the growth of a foreign proteid and that the anatomical place in which they grow determines the symptoms. Miliary tuberculosis, for instance, being very like typhoid in its symptomatology.

Dr. Wells' address carried with it a wealth of information and was both interesting and instructive.

The discussion then became general and many interesting experiences were related.

A vote of thanks was extended Drs. Kendall and Wells.

The meeting was very instructive. The attendance was sixty-seven.

ARTHUR G. BOSLER, Secretary.

CHICAGO LARYNGOLOGICAL AND OTOLOGICAL SOCIETY.

Regular Meeting, May 27, 1913.

The president, Dr. J. Gordon Wilson, in the chair.

DEMONSTRATION OF TWO CASES.

Dr. Otto J. Stein said that there was nothing unusual in the case of Vincent's angina in the boy, but he wanted to show the specimens correctly, side by side with the clinical case. These specimens are very profuse in the characteristic organism—the spirillum and the fusiform bacillus. He took some of the smear from the left tonsil, which was involved at the time—and after abrasion of the tissues of the right tonsil, the one not involved, he put this secretion underneath. You cannot inoculate on the surface. Being anerobic, it must be buried. Both tonsils are now ulcerated. (Later: Two weeks after showing this case, both tonsils were removed completely by Sluder technic, with no infection of surrounding tissue.)

In the second case the double abductor paresis was rather unusual. He had not seen this man since a month ago, and he presented a typical abductor paresis at the time. The right cord showed an involvement of the internal tensor as well, with serrated edge and shortening of the cord, and a slight dipping inward of the arytenoid ridge, while the left cord showed nothing but involvement of the abductor up to the vocal process. The little chink was present in the back. On attempt to separate by deep inspiration, the cords made a quiver—just an effort and nothing more—there was no abduction whatsoever. Examination for some cause in the neck and chest revealed nothing physical. There was no evidence of anything, and only the x-ray demonstrated the presence of the aneurysm which involved the entire arch, around to the end of the third division of the arch. Dr. Stein understood, from what internists told him, that it is not unusual at all to have absolutely no physical manifestation of the aneurysm for some time, while the x-ray pictures will show it always before such manifestations develop, as in this particular case, and which demonstrates very nicely what the laryngologist can do sometimes in arriving at an early diagnosis.

DEMONSTRATION OF THE STRUYCKEM-SCHAEFER MONOCHORD.

Dr. Alfred Lewy states that various instruments have been used for testing the hearing of higher tones, such as the Galton whistle, Koenig rods, and the Meldestimmplatten and the monochord. This one is the Struyckem-Schaefer monochord. The number of vibrations depends on the length, width and tension of the strings. The pitch is known by the position of the movable block. Range from about *g* to beyond the high pitch of human perception. Can be used for bone as well as air conduction. The lower tones are brought about by the transverse vibrations, the highest tones by the longitudinal vibrations. The most practical application of this instrument is in testing the high tone limit. By means of this instrument, Wolff, of Berlin, came to the conclusion that characteristic for nerve deafness is a greater loss of perception for high tones by air than by bone conduction; that is, bone conduction is better than air conduction for high tones, the reverse being true for lower tones. This also occurs in marked effusions of fluid in the middle ear or external canal.

DISCUSSION.

Dr. Robert Sonnenschein said so far as he can see, with the use of the instrument demonstrated by Dr. Lewy, with which he has had only slight experience, it is very difficult in a great many cases, when you get up as high as c, 6, and c, 7, to get an appreciable tone constantly. Of

course, when you get down to small c, 4 and 5, you can, but you can get that with a good tuning-fork. So thus far he cannot see any very great advantage, as compared with a small c, 5, fork.

Dr. George E. Shambaugh said that he is coming to appreciate more and more that the testing of the upper tone limit is one of the most valuable tests that we have in diagnosis, as well as prognosis. A c, 4, tuning-fork does not suffice for this test—except in advanced stages of labyrinth deafness—but where one gets an appreciable loss of hearing for the c, 4, tuning-fork, one could dispense with the test, because the other tests would show you the condition.

The testing of the upper tone limit is especially valuable in the study of cases of advanced, long-standing middle-ear deafness. In many of these there begins sooner or later to develop a degeneration in the labyrinth—labyrinth deafness which one cannot detect with the Weber and Rinné or the Schwabach tests, because these tests will continue to give the characteristic reactions of middle-ear deafness. The quickest way in which one can detect beginning labyrinth degenerations is by testing the upper tone limit.

Dr. J. Holinger said that Burkhardt-Merian, of Basle, was the first to recognize the diagnostic importance of the upper tone limit, and used it systematically. He employed a whistle which he perfected in all details, calling it "Galton whistle." The original Galton whistle had simply the movable piston, and was not made for the highest sounds. Burkhardt-Merian determined the form of his mouth and its relation to the bore of the whistle. He introduced the screw and gauge on the piston. It ought to be called "Burkhardt's whistle." Some of these Galton whistles have done pretty good service. Others were not executed so carefully and accurately; therefore, the results were not uniform. Later on, Edelmann knew that the upper limit of his series was the most unsatisfactory part. He tried to gauge his whistles by means of Schwendt's dust figures. But in 1899, when Dr. Holinger got his set of tuning-forks, there was a rumor that the Galton whistle was not scientifically accurate. It was said that in the highest pitch a turn of the screw of the piston means a rise in pitch of half an octave; in the lower region of the whistle, only one or two tones. Therefore, the original Edelmann's whistle could not be considered a "scientific" instrument. It was improved later on. In 1900, when abroad, the speaker saw the monochord in use very extensively, but it was an entirely different instrument from the one demonstrated by Dr. Lewy. He had the impression then that it was not an instrument to be used in the office every day, because it was unhandy. The instrument shown by the essayist is carefully gauged and is much more handy.

Dr. William L. Ballenger has had no experience with this instrument, although he has owned one for years. He did not understand just how to use it until Dr. Goldstine's article came out last March. He has had great difficulty with the Edelmann Galton whistle. The instrument he has was made in 1903. It can be tuned in different pitches. That is, you cannot set it and then go up all the pitches by turning the main apparatus, but you must turn a tuning apparatus at the other end of the instrument, and he finds great difficulty in getting the same intensity of pitch, and hence he has felt that it was not a very useful instrument in his hands. But with this instrument we can have a constant pitch and greater accuracy. It is a simple instrument, and he hopes to make use of it in the future.

Dr. Lewy, in closing the discussion, said that the practical advantage that the instrument he exhibited had over the Galton whistle is that it assists us in obtaining the bone conduction for high tones as well as the air conduction. The Galton whistle gives us only the air conduction. It may be that through this we will be able to add to our diagnostic and prognostic ability. He simply presented the instrument for what it was worth, and in the interests of the society.

THE NASAL VOICE WITH REFERENCE TO ITS BEARING ON THE PRACTICE OF RHINO-LARYNGOLOGY.

Dr. Elmer L. Kenyon gave, 1, the manner of production of the different forms of nasaling, with differential diagnosis; 2, application to the practice of rhino-laryngology. Both functional forms of nasaling occur not uncommonly following operations for adenoids—mistaken operations on the nose by rhinologists, because of ignorance of the forms and diagnosis of nasaling. Other functional causes for nasal voice; 3, whether the object be to lessen any existent tendency to middle-ear inflammation, or to improve the breathing through the nose, or to improve the speech, the presence of an imperfect palate serves to reverse in large measure the ordinary indications for operation for an occluded nose or naso-pharynx. If this be not carefully borne in mind in cases of cleft palate, much harm may be done to the already impaired speech; 4, treatment by voice training for both forms of functional nasaling.

DISCUSSION.

Dr. J. Holinger thinks there is another phase to the question discussed by Dr. Kenyon. Dr. Kenyon warned against the removal of adenoids under all circumstances, without regard to other organs. This is a timely suggestion. At present the speaker is treating a child whose adenoids had been removed about a year ago by a laryngologist who does not make any pretensions of treating ears. The boy has highly retracted drum membranes, is therefore hard of hearing and has a decided defect of speech, consisting of an apparent rhinolalia, which is nothing but the consequence of lack of hearing. The ear was treated three or four times, and the mother was

instructed to watch the boy. It was surprising how quickly he improved; he speaks much better now. Dr. Holinger thinks it is often not so much a question of instruction as a question of correcting the condition in the ear.

Dr. Joseph C. Beck was very much interested in the paper, and it reminded him of some cases that he had had of speech defects. One case he showed before the society several years ago, of rhinolalia aperta, in a case of congenital short palate, which, through training, before he had done anything, refused to respond. He subsequently injected paraffin behind the mucous membrane in the region where one would expect this palate would meet the posterior margin of the soft palate, and immediately after the injection this patient began to speak more clearly and distinctly, and the result was very satisfactory, indeed. There was an interesting fact about this patient, and that was she was a woman then of twenty-five years and did not know that she had this defect. The doctor wanted a record of her speech before he did anything for her and so he thought of Dr. Brown, of Milwaukee, who had recorded his cases by phonograph, so he had her talk into a machine, and when she heard the record she was completely paralyzed and fainted away, for she did not know she had spoken that way.

He was reminded of another case following removal of adenoids, in which the patient developed a distinct rhinolalia aperta, and he thought that he had perhaps traumatized the palate. There was perfect action in the palate. The condition did not improve for some time. He examined the patient very carefully, and found a very soft portion of the hard palate, and in taking a dental radiogram he found a marked deficiency of bone in the hard palate—a congenital deficiency. This voice defect was not present while the adenoids were present, but when he had removed the adenoids—which was not done for any other purpose than a distinct systemic condition—this speech defect occurred.

Another point: The doctor said it is difficult to examine the palate. Dr. Beck has examined the palate, and you can see the action of the palate during speech and see what condition it is in.

Dr. Alfred Lewy said that one idea that impressed him after hearing Dr. Kenyon's paper was the great neglect of the entire subject of speech defects by the medical profession in this country. Most of the treatment of speech defects is done by people who advertise to cure stammering, and use bizarre methods, such as causing the patient to sing the words or to go through certain peculiar motions, and so forth. In the public schools in Chicago some effort has been made to train special teachers in the correction of defective speech, but altogether, in this this country, the subject has been very largely in the hands of charlatans, and he thinks it is largely the fault of the medical profession, and that we need such papers as that of Dr. Kenyon to show us the importance of the subject and the possibilities that lie therein.

Dr. Kenyon, in closing the discussion, congratulated Dr. Holinger on his diagnosis in the patient whose hearing was impaired. It is often not an easy diagnosis to make. Many a child talks badly because he does not hear correctly. Many a child does not talk at all because he cannot hear exactly, and he may not be more than moderately deaf.

Paraffin injection in palatal cleft is, of course, a valuable procedure. He referred to it merely to point out that adenoid tissue serves exactly the same purpose as the paraffin—it helps to prevent the air from going upwards into the naso-pharynx, when the impaired palate does not sufficiently perform that function.

It would seem as if the naso-pharyngoscope passed through the nose into the naso-pharynx might aid in diagnosis in difficult cases of imperfect palatal movement, by enabling one to watch the movements of the palate; but diagnosis is usually possible by the much more simple methods described.

So far as the patients not recognizing their own voices is concerned, that is very true. None of us know our own voices, and patients with the most apparent defects of speech—if they be children and have never been told about their incorrectness of speech—believe that they talk as well as anybody, and they have to be told in order to know that they have a defect of speech.

REPORT OF HEAD CASES IN WHICH SKIAGRAPHS ARE OF INTEREST.

Dr. W. L. Ballenger presented a number of very interesting and instructive photographs of skiagraphic plates to illustrate their value in the study of the diseases of the nasal accessory sinuses and mastoid process. He presented two plates which showed a single ethmoid cell involved in each instance, and brought out the fact that in such cases the operation for the drainage and exenteration of the diseased cell could be done with a minimum amount of surgical trauma. In one of these cases the patient had been repeatedly operated on by a competent specialist, but without relieving the suppurative symptoms. Dr. Ballenger, by means of the plate, located a single ethmoid cell, which he operated on, with entire relief to the suppurative process. In the other plates showing a single cell involved, it had been diagnosed as a case of cerebro-hydrorrhea, because of the profuse watery discharge from the patient's nose. The plate, however, shows one cell located under the right frontal sinus to be involved. The interesting points concerning this case were the possibility of locating a single infected ethmoid cell, which was giving rise to a nasal hydrorrhea. There was no purulent discharge in this case, but, in spite of this, the cell was distinctly cloudy, as much so as in suppurative disease. It also cleared up the diagnosis. He also showed plates showing the osteoporotic destruction of

the inner plate of the frontal bone from luetic disease. Also plates contrasting a healthy mastoid process with a diseased process.

Plates were also shown showing extensive fractures of the skull, in which the patient, while riding in an automobile, collided with a telegraph pole and was rendered unconscious for three or four days. On recovering, he was found to have nystagmus to the opposite side, nausea and vomiting. On examination by Dr. Ballenger, two months later, the nystagmus, nausea, etc., had disappeared, but he still suffered from disturbance of equilibrium, and was totally deaf in the right ear. The plates show a large arch fracture, extending from the outer angle of the left orbit to the inner angle of the right orbit, and a Y-shaped fracture extending through the temporal bone on a level with the cochlea and vestibular apparatus.

DISCUSSION.

Dr. R. C. Lynch, of New Orleans, (by invitation) said that he had been using x-ray plates in his work in New Orleans for the last six or eight months, and has found that they help very materially in every branch of the work, especially in the diagnosis and proper interpretation of sinus suppurations. One case of mastoiditis that gave him a good deal of concern, because of the very chronic character of the inflammation and of so few clinical symptoms that accompanied the condition, was really treated successfully on account of the use of the radiogram. This patient had the usual onset in an acute otitis; the drum ruptured. He was an ignorant man and neglected it for some time, and then began to suffer with headache, and the headache was the only symptom that he gave of any disturbance. His headache increased in intensity until he came to the clinic for observation or for some relief. The x-ray picture showed the normal side to have a very extensive cellular mastoid, the cells extending well forward into the zygoma, very much higher than usual, over the roof of the tympanic cavity and far back, and especially the tip was very large and cellular. On the diseased side it showed the process to extend even into the diploe, and he was rather suspicious of a low-grade osteomyelitis developing in this case, and in consequence, or, rather, as a result of the extreme degree or the great amount of involvement of the bone, as shown by the x-ray. In doing the operation, he extended it well beyond the limits that he would had he not had the x-ray picture at his side. This man recovered without any disturbance. Dr. Lynch believes that if he had not had a radiograph at his disposal, and the measurements taken carefully before operation by the radiologist, that the extent of the operation would not have covered the diseased processes, and the consequence would have been that this patient would not have recovered in the very nice and proper way that he did under this treatment. So that he believes that the x-ray is very valuable.

Dr. Joseph C. Beck said that it was too bad that Dr. Ballenger could not have shown the plates instead of the photographs. It has been, by the radiologists all over the world, a prohibitive thing to demonstrate facts by photographs, and he was partially to blame for this exhibition tonight by photographs, because he promised Dr. Ballenger that he would bring down these frames for showing the plates. So he wished to apologize.

It was certainly a pleasure to him to hear men express themselves in such a way regarding the use of the x-ray. He was and is very enthusiastic over it, but still he might say at this time that he is losing a bit of this great enthusiasm.

The fine points that Dr. Ballenger brought out, of localizing one single cell, he would take issue with, especially in a single radiogram, for how can we know by looking at one plane from one point how many cells are involved? With stereoscopic pictures, however, we can tell better how many cells are involved. The speaker would not like to go on record as saying he could make this diagnosis.

Another thing: To leave the interpretation of the condition that you are dealing with to a radiologist is a mistake. Leave him out entirely. Just see that he takes it correctly, and make your own interpretation of the print.

Dr. Ballenger, in closing the discussion, said that Dr. Beck was entirely mistaken about the impossibility of showing a single cell except by the stereoscopic method. If the print is taken from the corner of the head, as it were, through the orbit, and not the front view, in this way you get a perspective view of the cells back to the sphenoid, and as far forward as the frontal and anterior ethmoid. You can see the cells one by one from the front to the rear, and then, if you will take the opposite side, you will also see that same cell from the opposite side, but from a different angle, and in that way, by taking two plates of the cell, one cannot be misled, and if the cell is one that can be penetrated with a probe, if it happens to be so located, you can place it accurately and only remove that one cell, as was done in one of the cases reported.

In the second case reported, he removed two or three cells. The point he wanted to make was simply that it is possible to do this without stereoscopic plates. In taking the pictures as suggested, one plate shows absolutely every sinus of one side of the head, and the second all the cells on the opposite side, and he knows of no possibility of being confused by this method.

PRELIMINARY REPORT ON CAISSON WORKERS' DEAFNESS.

Dr. G. W. Boot presented twelve cases with the hearing tests. Cassion workers are subject to a series of accidents which are known among the men as being "blocked," "the bends," "the chokes" and "blind staggers." The first and last are the only

conditions which are of special interest to the otologist. "Blocked" appears to refer to an acute tubal occulsion. "Blind staggers" refer to a condition in which there is vertigo. The examination of these twelve cases shows that those of the men who had some predisposing lesion in the nose developed the symptoms of tubal tympanic catarrh, but the characteristic change was the development of a labyrinthine type of deafness. There was lowering of the upper tone limit and shortening of bone conduction, with positive Rinné. The amount of labyrinthine deafness depends on the length of time the individual worked under compressed air, as well as the amount of pressure he worked under. The greater the pressure and the longer the time, the more marked was the degenerative change in the labyrinth. The characteristic deafness occurred gradually and appears to be the result of a gradual degeneration of the cochlear branch. Workers under compressed air should undergo an examination of the ears and nose before being permitted to follow this occupation. Abnormalities in the nose should be corrected. The labyrinthine deafness that occurs is incurable and can be prevented only by refraining from working under compressed air. The sudden lesions occurring in the semicircular canals, vestibule and cochlea from the formation of air bubbles, can be prevented by a slower decompression on coming out from the compressed air.

DISCUSSION.

Dr. Peter Bassoe (by invitation) said he was glad that Dr. Boot had reported this work to the society, because otologists can do a great deal toward clearing up various points about caisson disease, and also there are things in caisson disease that come as near animal experiments on a human being as anything can be, and if properly carried out at the proper time, may help to clear up many points in otology.

We must bear in mind that the man who works in compressed air is subject to trouble when he goes into the compressed air and when he comes out again. So far as ear conditions are concerned, the most common ones, such as "blocking," are brought about during compression, and the ear is the only organ affected by the state of compression. Of course, what happens when the air pressure is rapidly rising is that the air is all the time being compressed, there is more oxygen and nitrogen taken into the blood, and in order to avoid being "blocked," the middle ear must contain the same kind of air as the outside air, otherwise there will be unbearable pressure on the drum, hence every worker is taught to swallow air while going in, and if he does not do that, he invariably gets "blocked." Some of those who have investigated very extensively along this line believe that primarily all of the ear troubles of caisson workers are due to this stage of the compression—that the chronic troubles that follow in the middle ear and internal ear are secondary to this disturbance that occurs during blocking. The work of Dr. Boot has shown that we do deal with a good deal of labyrinth trouble in many of these cases, and it seems to the speaker that he has shown pretty well that the stage of decompression has a good deal to do with it. Practically all of the other forms of caisson disease are due to the liberation of the air from the blood during too rapid decompression. That is, the period of danger in caisson workers. Air bubbles are liberated in the joint fluids, cerebrospinal fluid, or spinal cord, and they may become paralyzed. Dr. Bassoe examined about a hundred and eighty men, over half of whom gave a history of trouble coming on after they came out of the caisson, particularly the cases of "blind staggers." They come out, are extremely dizzy, vomit, and often become deaf. It is of interest to figure out what happens in those cases, and whether it is liberation of air in the endolymph or a liberation of air in the auditory nerves—perhaps sometimes in the brain. There is here a possibility of the production of local lesions, that might be of great interest to otologists. It has been suggested, for instance, that a local lesion might produce tone islands or other interesting disturbances, but so far as he knows, trained otologists have rarely gone to work on these cases. Some work has been done in Vienna, where some very painstaking observations were made. It would seem that otology might profit from a study of this disease, because it is almost comparable to an experiment. You take a man from the normal pressure of fifteen pounds and put him in forty-five or fifty pounds in so many minutes, and let him out in so many minutes, and then study the conditions present. We have this work going on nearly all the time, with wonderful opportunities for research. In the fatal cases we now know quite well what we are dealing with, namely, air bubbles in the blood. There is sometimes the condition spoken of as "chokes," in which the patient becomes suffocated and cyanotic. He sometimes recovers, but more often dies, and it has been found that the right auricle may contain huge air bubbles.

Dr. J. R. Fletcher thought that the cases referred to by Dr. Boot having the blind staggers are very likely serous labyrinthitis. It seems to him that where the air bubbles are liberated in the cochlea or in the semicircular canals, the damage would be very great to the organ. After mastoid operations we frequently see the production of serous labyrinthitis, and it acts in just the same manner that Dr. Boot mentioned in his paper, and it is not incomprehensible at all that the increase of pressure should produce a rather prolonged hyperemia, primarily, which would produce what we are justified in calling a serous labyrinthitis. In the cases in which the damage is very great there must be, then, a large quantity of fibrin in the serum, which becomes organized and does the real damage. So long as there is not much fibrin thrown out, the recovery

is probable, but sometimes very slow, even extending over years. In operative cases—not caisson workers—it may extend over a long time, but the majority recover.

Dr. Boot, in closing, said that the most characteristic thing in these cases is the degeneration of the auditory nerve, just as you see in deafness resulting from occupation—boiler-makers' deafness, for example—a slow degeneration that goes on, not at the time the men are working, but afterwards, after they have ceased working. This degeneration continues for a considerable length of time, and they lose the upper limit of hearing. That, he thinks, is the most characteristic lesion in these ear cases.

Another point of considerable importance is the fact that the lesion of the vestibular portion of the nerve, whatever it may be, seems to be recovered from completely. There was only one case where he did not get perfect response to the caloric test.

When going under compressed air, the endolymph would be forced out, and as they came out it would be forced back in again into the endolymph canals.

Dr. Wilson said that he thought the perilymph is the part that is first affected in the compression.

Dr. Boot thinks the blocking is purely middle-ear trouble, the same condition we see in coming up and down in elevators, and which is relieved by swallowing, and these men are instructed to swallow. The other features he thinks are of the labyrinthine type—changes in the labyrinth.

He had hoped to be able to make some experiments with guinea pigs, in order to get the microscopic appearances of these ears, but as yet has not had an opportunity to do so.

Dr. Stein asked whether any of the cases had died and post-mortems been performed, to which Dr. Boot replied that he knew of none who had died.

DE WITT COUNTY.

The De Witt County Medical Society met in the Elks' clubrooms in Clinton, Ill., January 20, 1914, at 2 p. m., with President O. B. Edmonson in the chair. Those present were Drs. Chapin, Cole, Davis, G. S. Edmonson, O. B. Edmonson, Wilcox, Graham, Myers, Pugh, Price, Marshall, Hooker, Carter, Dr. Cleaves Bennett of Champaign and Dr. C. S. Nelson of Springfield.

The minutes of the previous meeting were read and approved.

Dr. Bennett then addressed the society, speaking on the subject of "Obstetrical Difficulties." The doctor spoke from an experience of about 1,000 cases of confinement in his own practice and a considerable number of cases seen in consultations in the practice of his confreres. His observations covered placenta previa, post-partum hemorrhage, eclampsia, abnormal presentations, contracted pelves, lacerations and others of the obstetrical emergencies, accidents and complications that cast their shadows across the rose strewn path of the obstetrician in general practice. Dr. Bennett is a ready speaker and his address had the earnest ring that betokens an intimate experience with the difficulties under discussion. The lessons suggested by these experiences are to be thorough in the examinations, watchful during the progress of labor, to keep a cool head and a stout heart in the event of an emergency, to institute the appropriate treatment promptly, and, above all, to call in counsel without undue delay.

Dr. Bennett's address evoked generous discussion. Almost every physician present spoke on some one or more of the "Obstetrical Difficulties" and reported illustrative cases from their own experience.

Dr. C. S. Nelson was then called to speak. Dr. Nelson was present by virtue of his position as councilor for this district.

To the surprise of most of the physicians present Dr. Nelson disclosed the fact that he was born in De Witt county and lived here for many years, having at one time conducted a drug store in the neighboring town of Wapella. He related a number of interesting anecdotes relating to the period of his residence in this county and then in his capacity of councilor addressed the meeting on the general subject of medical organization. He spoke in particular of the dangers to the people and to the medical profession from attempts at unwise and vicious legislation and of the necessity for thorough organization by physicians the better to protect their own interests and those of the people whom they serve.

The address was well received and at its conclusion a vote of thanks was given both Dr. Nelson and Dr. Bennett for the valuable and interesting part they had contributed to our program.

The election of officers for the year 1914, left over from the October meeting, was then carried out and resulted as follows: President, J. C. Myers; vice-president, C. W. Chapin; secretary-treasurer, C. W. Carter; censor, J. M. Wilcox.

A motion then prevailed that the public be notified by a card in the daily press the day preceding our regular meetings that office hours will not be held during the time of meeting in order that physicians may not be prevented from attending said meetings.

A motion was then made and carried that we adjourn to meet Friday evening, January 23, at 8 p. m. in the Elks' clubrooms for the purpose of revising the fee bill and that notice of this meeting be given in the daily papers.

The meeting then adjourned.

CHARLES W. CARTER, Secretary.

JEFFERSON COUNTY.

The Jefferson County Medical Society met in the reception room of Drs. Thompson and Maxey in Mt. Vernon, Ill., Thursday evening, February 19, 1914. Twenty-five physicians were present and all entered into the spirit of the meeting, making it one of the most successful in the history of the society.

President J. H. Mitchell presided and the program of the evening was as follows:

"Tuberculin in the Diagnosis and Treatment of Tuberculosis," Dr. Moss Maxey. The most excellent paper of Dr. Maxey was discussed by Drs. Gilmore, Ward, C. W. Hall, Hamilton, Rainey and Andy Hall.

"The X-Ray as an Aid in Diagnosis" was presented by Dr. W. H. Gilmore. This was unusually interesting, as Dr. Gilmore illustrated his lecture by showing plates made from the various pathologic conditions.

Following the scientific program light refreshments were served, followed by several interesting impromptu speeches. Dr. George Tupper surprised the members of the society by singing his "Swan Song" and informing them that he had disposed of his office and business to Dr. E. E. Edmunson and that he would soon seek a new location, probably in southern California.

The following out-of-town physicians were present: Drs. Clark, Dix, Sibley, Carmi, Freeman, Belle Rive; Edmunson, Chicago; Rainey, Salem; Culli and Harper from Ina. Dr. Sibley, who is the councilman from this district, said this was the best medical meeting he had attended in southern Illinois.

ANDY HALL, Secretary.

McHENRY COUNTY.

The McHenry County Medical Society held a regular meeting at the village hall in North Crystal Lake, January 6, 1914. The meeting was called to order by the president, Dr. H. D. Hull, at 10:40 a. m. Present were Dr. T. A. Davis of Chicago and Drs. Hull, Freeman, Pflueger, Pillinger, Theobald, Maha, Wells, Anderson, Windmueller, Guy, Smith, Baccus, West, Francis and Thon.

The minutes of the last meeting were read and approved as read. The applications of Drs. W. V. Gooder of Marengo and H. C. Thon of Woodstock, having been acted upon favorably by the board of censors, these names were separately voted upon, and these doctors declared duly elected to membrship.

Dr. Davis was then introduced by Dr. Hull and gave us a lengthy and very interesting talk on "The Diagnosis of Some of the More Common Surgical Affections of the Abdomen," speaking from the following general outline:

Importance of history, methods of physical examination, laboratory aids, importance of blood findings to determine time of operative intervention, recent biological methods in the diagnosis of carcinoma of the stomach, value of improved methods of radiography.

A clinical case was then demonstrated to the society by Dr. Davis.

At 12 o'clock the meeting adjourned to the hotel for dinner.

A. B. SMITH, Secretary.

MORGAN COUNTY.

The society met February 12, 1914, at Jacksonville in the library rooms. Members present were: Adams, Black, Cole, Dewey, Foley, Lowe, Milligan, McLinn, Norris, Ogram, Stacy, Webster and Woltman.

Drs. Black, Adams and Woltman reported the condition of the society's library. The maintenance of a current literature index and the services of an acting librarian during the past six years have involved an expenditure of about $6,000 and has certainly been worth while, according to the feelings of those who expressed themselves in discussing the report. The society has decided to continue its subscriptions to the journals and also to continue the acting librarian and indexing.

The following is list of journals subscribed for: *American Journal of Insanity, American Journal of Medical Science, American Journal of Obstetrics, American Journal of Ophthalmology, Annals of Otology, Annals of Ophthalmology, Annals of Surgery, Archives of Internal Medicine, Archives of Ophthalmology, Archives of Pediatrics, Boston Medical and Surgical Journal, British Medical Journal, Edinburgh Medical Journal, Illinois Medical Journal, Johns Hopkins Bulletin, Journal American Medical Association, Journal Laryngology, Journal Nervous and Mental Diseases, London Lancet, Laryngoscope, Medical Record, New York Medical Journal, Ophthalmic Record, Ophthalmology, Surgery, Gynecology and Obstetrics, Therapeutic Gazette.*

Dr. G. R. Bradley presented a paper reviewing the "Etiology of Pneumonia." Dr. T. J. Pitner presented without manuscript points on diagnosis and treatment based upon his long clinical experience in this disease.

Dr. Josephine Milligan gave some valuable clinical data on pneumonia in children.

Drs. Webster and Stacy discussed the papers. Webster said that it was rare for pneumonia itself to end fatally, complications causing the exit of the patient. Stacy called attention to the facts necessary for establishment of infection: Infecting organism in sufficient numbers and an atrium and diminished resistance. The last factor being present in sufficient degree, practically always establishes a pneumonia. He mentioned bleeding to relieve the strugling heart and enteroclysis to resupply the circulatory deficit, as required.

GEORGE STACY, Secretary.

ROCK ISLAND COUNTY.

The Rock Island County Medical Society held a regular meeting February 10, 1914, at Manufacturers Hotel, Moline. Called to order by President Snively. Minutes of last meeting were read and approved. Dr. C. E. Robb of Rock Island was accorded unanimous election to membership. Acknowledgment of the *Chicago Tribune* for resolutions of the December

meeting were received and filed. Dr. First for the committee on public school medical supervision for the city of Rock Island, reported correspondence with fifteen superintendents of public instruction in as many towns, with the resulting impression that the system most in vogue is that of leaving this matter in the hands of a school nurse, with the occasional assistance of a consulting physician. The committee therefore recommended that for the present this society make no definite recommendations. The report was accepted and the committee discharged.

The scientific program was of exceptional interest, every number receiving the best of attention and arousing the desired discussion. The program was rendered in full, with the addition of some twenty or more "Hookworm" views through the courtesy of Dr. Littig.

"Injuries to the Nose," Dr. L. Ostrom, Rock Island.

"Vagotonia," Dr. L. W. Littig, Davenport.

"Market Milk" (stereopticon illustrations), Dr. O. P. Thompson, Waterloo, Iowa.

Unfortunately, the meeting was the poorest attended of the year. Present members: Leipold, Rochow, Snively, Williams, Beam, Chapman, R. B. Miller, Hauberg, Foster, Asay, Seids, Littig, Peterson, Sala, Lachner, Ostrom, First, West, Sargent, Craig. Visitor: Thompson.

W. D. CHAPMAN, Secretary.

STEPHENSON COUNTY.

The annual meeting of the Stephenson County Medical Society was held at Freeport, January 29, 1914. The election of officers resulted as follows: President, Karl F. Snyder; vice-president, W. L. Karcher; secretary, J. Sheldon Clark; treasurer, Nelson C. Phillips; member board of censors, Mary L. Rosenstiel; delegate to state meeting, D. C. L. Mease; alternate delegate, James A. Poling.

Mr. John B. Newman, assistant pure food commissioner of the state of Illinois, addressed the society on the subject of food supplies and the handling of foodstuffs. He stated that milk and milk products constitue one-sixth of the world's food supply and that it behooved us to guard well this valuable article of diet that is rendered so dangerous to mankind by careless handling. Mr. Newman is not in sympathy with the common custom of exposing foodstuffs to "every wind that blows," but advised that they should be kept under glass or in cold storage rooms. He also invoked the backing of physicians for the reforms advocated by the state authorities. A vote of thanks was given Mr. Newman for his address.

The subject of adopting a fee bill was then taken up by the society and it was decided to charge $2 for calls within the city between the hours of 7 a. m. and 6 p. m.; $2.50 for calls between 6:30 and 10 p. m., and $3 to $5 for calls between 10 p. m. and 7 a. m. Country visits will be made at the rate of $1 per mile and up, depending upon the condition of the roads and delays occasioned thereby.

Dr. Charles L. Best reviewed the progress made in medicine by workers in various parts of the world and also mentioned the activities of the local society, especially the work of its red cross committee in sponsoring the collection of a fund for the flood sufferers in Ohio and Indiana, amounting to over $1,000. A medical library with free circulation of current medical journals was undertaken by the society during the year which proved to many the value of such a system.

The following members were present: Drs. Stiver, Snyder, Stealey, Mease, Karcher, Rideout, E. H. Best, Torey, Rosenstiel, Poling, Hewetson, Peck, Burns, Charles L. Best, D. G. Smith, Harlan, Grant, Phillips, Leavy and Clark.

WINNEBAGO COUNTY.

The Winnebago County Medical Society assembled at Nelson Hall, Rockford, February 10, 1914, Dr. E. E. Ochsner in the chair. Members present, twenty-three. The minutes of the previous meeting were approved. Dr. C. M. Ranseen presented a case of simple hypertrophied goitre in a girl aged 14 years, operated on two weeks previously. Dr. J. E. Allaben presented a case of bone grafting, removing a portion of one tibia and transplanting it as a bone plug into the hollow of the opposite fractured tibia. The doctor obtained good union and showed X-ray photos to illustrate the new bone growth about the plug. Dr. W. B. Helm reported a case of Caesarean section, followed by hysterectomy. The etiology of this procedure was the presence of a large fibroid in the posterior cervix. The convalescence and recovery of this patient were as good as any normal delivery. Dr. Thomas Kinley reported a case of measles in a lad aged 10 years which became complicated during convalescence by convulsions affecting the right side. He eventually recovered. All cases were generally discussed. The program proved decidedly interesting. It is the intention of the society to reduce the reading of papers and to devote more time to case reports.

The auditing committee reported the treasurer's accounts for 1913 to be accurately balanced. The president appointed Dr. Goembel to serve as censor for three years. Adjourned.

DR. C. M. RANSEEN, Secretary.

OVERHEARD AT THE CLINIC.

Surgeon: What is the next case?

Assistant: Hung Far Lo.

Surgeon: Does he want an operation or only a suspensory?

Assistant: Hung Far Lo is the patient's name.

Surgeon: Oh, I thought that was what ailed him. Please distinguish between cases and patients.

EVEN THE POISON WAS ADULTERATED.

Four flies, which had made their way into a certain pantry, determined to have a feast. One flew to the sugar and ate heartily, but soon died, for the sugar was full of white lead. The second chose the flour diet, but he fared no better, for the flour was loaded with plaster of paris. The third sampled the syrup, but his six legs were presently raised in the air, for the syrup was colored with aniline dye. The fourth fly, seeing all of his friends dead, determined to end his life also, and drank deeply of the fly-poison which he found in a convenient saucer. He is still alive and in good health. That, too, was adulterated.—*Lippincott's.*

Personals

Dr. Frank Smithies, Chicago, has been elected gastro-enterologist to the Augustana Hospital.

Dr. Howard E. Wharff, Edwardsville, fractured his right arm while cranking his automobile January 20.

Dr. Ben B. Griffith, newly appointed head of the Springfield Department of Health, assumed the duties of his office January 7.

Dr. Benjamin H. Breakstone, Chicago, has resigned as president of the medical staff of the Maimonides Kosher Hospital.

Dr. David Lieberthal has resigned as professor and head of the department of dermatology and syphilography of Bennett Medical College.

Dr. Clesson C. Atherton, physician to the Lincoln schools, has been appointed assistant superintendent of the Watertown State Hospital.

Dr. Howard L. Bye has been appointed assistant in the department of surgery in the University of Iowa.

Dr. C. Max Hawley, assistant superintendent of the Watertown State Hospital, has been transferred to a similar position at the Elgin State Hospital.

Dr. Wilson K. Dyer of the staff of the Watertown State Hospital has resigned to take up private practice.

Dr. Charles F. Sanborn has resigned as assistant warden of the Cook County Hospital and has been appointed superintendent of the Cincinnati Hospital.

Dr. Clesson C. Atherton, Elgin, physician to the Lincoln State School and Colony, has been appointed assistant superintendent of the Watertown State Hospital.

Dr. Samuel Amberg of the Otho S. A. Sprague Memorial Institute, Chicago, has been elected a corresponding member of the Society of Internal Medicine and Pediatrics, Vienna.

Dr. Marcus Whiting, Peoria, who is about to retire from practice and live on a farm in Northern Wisconsin, was given a farewell dinner by the Peoria Medical Society, at which he was presented with a gold-headed cane.

Dr. Ralph T. Hinton, superintendent of the Elgin State Hospital, was appointed superintendent of the Peoria State Hospital February 9, succeeding Dr. Henry J. Gahagan, who has been transferred to the Elgin State Hospital.

Dr. Arthur R. Edwards, Chicago, has fully recovered from an operation for appendicitis and removal of the gall bladder and has resumed his practice.

Dr. E. M. Arnold has removed his office from Fifty-first street and Ashland avenue to 5544 S. Ashland avenue, Chicago. Phone, Prospect 5474.

Dr. Emory Hill announces the removal of his office to 122 S. Michigan boulevard. Phone, Central 7163.

Dr. B. R. Felts of Johnston City is said to be seriously sick.

News Notes

—Plans for the dormitory addition to St. Joseph's Hospital, Elgin, have been completed, and work on the building will begin early next month. The cost of the addition will be approximately $25,000.

—The La Grange Sanitarium and Hospital Company has been organized and incorporated, taking over the Thornton Villa Sanatorium. The new institution will be continued under the old management, as the La Grange Sanitarium and Hospital.

—At the twenty-fourth annual meeting of the Chicago Visiting Nurses' Association, January 22, it was reported that an average of 519 calls a day had been made by the 69 nurses on the staff. The number of patients visited was 35,523, on whom 185,757 calls were made.

—Christian Science has long since been repudiated by Christian churches and by scientists of every denomination. Now comes the Independent Order of B'nai B'rith and through its western jurisdiction refuses membership to Christian Scientists. What next?

—At the eighth annual meeting of the Chicago Tuberculosis Institute, January 29, the following officers were elected: President, Dr. Theodore B. Sachs; vice-presidents, Dr. Robert H. Babcock and Mr. George W. Perkins; treasurer, Mr. David R. Forgan; secretary, Mr. Sherman C. Kingsley; directors, Drs. William A. Evans, James Alexander Harvey, John Ritter and George W. Webster; Rev. P. J. O'Callaghan, Hon. Harry Olson, Hon. Julian W. Mack, Mr. G. R. Durgan, Mr. H. N. Foster, Mr. George W. Perkins.

The Chicago office of the Allan Line has received cable advice from the Liverpool office stating that the new turbine quadruple screw steamer Alsatian, 18,000 tons, sailed from Liverpool on February 14 for Halifax, N. S., her winter port. During the summer season she will sail from Montreal and Quebec to Liverpool.

The Alsatian has accommodation for 250 first-class passengers, 500 second and 1,000 third-class, and in addition carries a crew of 500.

The requirements of the British Board of Trade as regards safety have not simply been observed, but exceeded in every point of construction, material and design. These steamers have a length over all of 600 feet and a depth of 54 feet. They are fitted with quadruple screws and turbine engines. In point of interior design and equipment they are finest ships operating to Canada.

The Alsatian will carry a number of motor lifeboats, each fitted with 30 horse-power, four-cylinder engines, and are individually capable of taking eight to ten ordinary lifeboats in tow. These motor boats are fitted with wireless telegraphy and submarine signaling apparatus.

The Calgarian, a sister ship of the Alsatian, will make her maiden trip from Liverpool on March 28 and will be operated in the Liverpool service in conjunction with the already well-known turbine triple screw steamers, Virginia and Victorian.

—Action has been taken in Illinois for a campaign of education for the prevention of nervous and mental diseases, according to a bulletin issued by the State Charities Commission. In January, 1914, a committee composed of Dr. H. D. Singer, director of the State Psychopathic Institute; Dr. E. A. Foley of the Jacksonville State Hospital, and A. L. Bowen, at the meeting of the State Hospitals Medical Association with the Chicago Neurological Society, presented a report on "A Practical Campaign for the Prevention of Nervous and Mental Disease." The plan of the committee did not consider sterilization, sex hygiene or eugenics as important remedies, but urged only those measures on which all authorities agree. The campaign of education to be conducted includes the use of space in newspapers for the publication of facts about the Illinois state hospitals; co-operation between the press and state charities; publication in popular magazines of articles written for the laity; compulsory psychiatry in all medical colleges, and psychopathic wards in general hospitals; a system of care for patients after they leave the hospitals, and a system of outpatient service to advise patients in dentention hospitals and homes. The report also urges a revision of the commitment laws, so that the insane may not be thrown into jails or held for trial like criminals.

Public Health

PUBLIC HEALTH.

—The Englewood Branch Society issued an unusually attractive *News-Letter* last month with supplements containing the cut reproduced in the proceedings and also a four-page collection of original songs sung at the banquet. The Englewood Branch surely knows how to pull off a fine entertainment.

—The *Bulletin* of the Montgomery County Medical Society for February continues its quotation from the "Principles of Medical Ethics," an editorial on the Anti-narcotic bill now before the U. S. Senate, and comments on the new addition to St. Francis Hospital at Litchfield, which increases the capacity of the hospital to 150 beds.

—The Chicago Department of Health has revised its rules and regulations governing the control of contagious diseases. From studies of the prevalence of these diseases and the relation of cases reported to deaths, the *Bulletin* some time since drew the conclusion that either the death rate was abnormally high or many cases were not reported. To encourage the prompt and complete reporting of cases, Health Commissioner Young has revised the rules in certain

respects so that the bread winners may avoid the necessity of leaving home during the period of quarantine, thus materially reducing the expense to the family. Where it is impossible to isolate the patient properly at home, arrangements will be made for hospitalization.

—The *Williamson County Physician* for February contains a write up of the January meeting, at which Dr. L. W. Bremmerman of Chicago gave an address. It also announced a discussion of "Malpractice" by Hon. D. T. Hartwell for the February meeting.

—Information has recently been received from various sources to the effect that, through agents and printed circulars, the statement is being circulated that the Bacteriol. physiolog. Institut (Piorkowski Laboratories), Berlin, Germany, has been licensed by the Treasury Department for the importation and sale in interstate traffic of "turtle tuberculin." These statements seem to emanate from so-called Piorkowski Laboratories, located, or represented as about to be located, in various cities in this country.

This statement is contrary to fact. After an inspection of the establishment by a representative of the Treasury Department and an examination of samples of the products at the Hygiene Laboratory of the Public Health Service, the Bacteriol. physiolog. Institut (Piorkowski Laboratories), Berlin, Germany, was refused a license by the Treasury Department for the importation and sale of their products in interstate traffic.

Under the act approved July 1, 1902, regulating the sale of viruses, serums, toxins, and analogous products in interstate traffic, such preparations applicable to the prevention and cure of diseases of man may be imported without license, provided they are not sold or intended for sale, but for scientific experiments.

The above mentioned act requires that each package of virus, serum, toxin, antitoxin or analogous product must be plainly marked with the proper name of the article contained therein, and the name, address, and license number of the manufacturer. Since this provision is strictly enforced, no difficulty should be experienced by anyone in determining whether a particular product has been propagated in a licensed establishment.

Persons or firms engaged in the sale of unlicensed products in interstate traffic are liable to a penalty consisting of a fine not exceeding $500, imprisonment not exceeding one year, or both such fine and imprisonment in the discretion of the court.—*From U. S. Public Health Report, January 30, 1914.*

—Two Chicago judges decided cases of interest to physicians recently. Municipal Judge Fisher held that physicians treating minors must tell the parents the nature of the disease or else they cannot recover their fees. The case was that of Dr. M. O. Hoover, who sued for his fees for attending a child with diphtheria. The doctor said he kept the fact of its being diphtheria from the mother because he did not wish to frighten her.

The other suits by Dr. A. E. Kay against the estate of Elizabeth Madigan was for fourteen days' attendance, the bill amounting to $401.50. Probate Judge Gregg held that the fee was excessive and cut it down to $59. The estate left by decedent amounted to $12,000.

—Asa E. Phillips, superintendent of sewerage for Washington, D. C., came to the defense of Chicago's plan at the federal hearing recently, with the assertion that sewage disposal without utilizing the drainage canal would cost the city $121,000,000 for a plant and $6,000,000 a year for maintenance. Whole territories would be depopulated by the odors and enormous damages would be assessed against the city. Moreover, he showed how the typhoid rate had been reduced from 65 to 10 per 100,000 population. (The *Bulletin* of the department of health has shown that the cost of the drainage canal has been more than saved by the reduction in sickness and death since the canal was opened.)

—Some hotel man in Omaha has been waging a campaign against the use of glass finger-bowls in hotels and restaurants and advocates the use of paper bowls in a metal holder. Idaho, through its state pure food commission, now holds that dining cars as well as hotels and restaurants cannot use finger-bowls. This strikes the *Inter Ocean* as extreme and it suggests that the bowls, if made of plain smooth glass, are as easily kept clean as other utensils and that the effort should be to enforce cleanliness.

HIGH AND LOW.

Naturally the clergyman was annoyed when the waiter asked if the luncheon party would be high church or low church. "What on earth has that to do with you?" he demanded. "A great deal, sir," explained the waiter; "if your friends are high church I must provide more wine; if low church, more wittles."—*Cardiff Western Mail.*

THE HUMAN TOUCH.

Manager—Your play seems to lack the human touch.

Playwright—You are mistaken, sir. My hero borrows money from his friends in almost every act.—*Boston Transcript.*

Marriage

JOHN CLARENCE LINDSAY, M. D., Chicago, to Miss Mabel Violet Baldwin of Bloomington, Ill., January 20.

CLARENCE C. HOLMAN, M. D., to Miss Beulah Babb Crews, both of Effingham, Ill., January 17.

THOMAS A. WOODRUFF, M. D., to Mrs. Carrie M. Ogden, both of Chicago, at New London, Conn., February 7.

GEORGE FREDERICK DICK, M. D., Chicago, to Gladys Rowena Henry, M. D., of Evanston, January 27.

Obituary

DR. CHARLES R. TRUE, for twenty-seven years a resident of Kankakee, passed away at his home in February, after an illness of long standing. About three years ago he suffered a paralytic stroke. Dr. True was 71 years old and is survived by two daughters, Mrs. Agnes Miller and Mrs. Fred Hackett.

Dr. True was born Aug. 28, 1843, at South Bend, Ind. During the Civil War he enlisted in the army and was a member of Company K. First Illinois Cavalry. After leaving the service he took up the study of medicine, and was graduated from Rush Medical College in 1865.

Funeral services were held at the First Presbyterian church, and were in charge of Whipple Post, No. 414, G. A. R., of which he was a member.

Dr. True's death will remove a man who was universally loved and respected. In a quiet and unostentatious way he was constantly doing deeds of kindness among the unfortunates who sought his aid and the benefit of his skill. His death brings a sincere sorrow that so useful a life has forever closed.

Deaths

JAMES P. BUCK, M. D., Jefferson Medical College, 1879; formerly a member of the Illinois State Medical Society; a surgeon in the Servian army during the war with Bulgaria in 1883; died at his home in Chicago, January 17, aged 57.

ALBERT A. FITTS, M. D., Howard University, Washington, D. C., 1878, of Batavia, Ill., a Fellow of the American Medical Association, local surgeon for the Chicago and Northwestern Railway Company, died in St. Petersburg, Fla., January 5, aged 60.

ORMOND ERLY HUTCHINS, M. D., Keokuk, Medical College, College of Physicians and Surgeons, 1906, died at his home in Warsaw, Ill., January 7, from pneumonia, aged 28.

FRANK JOSEPH LAIBE, M. D., Rush Medical College, 1894, a member of the Illinois State Medical Society, and for twenty years resident surgeon at the St. Mary of Nazareth Hospital, Chicago, died in that institution February 8, from pneumonia, aged 48.

CHARLES M. LYON (license, Illinois, 1877), a member of the Illinois State Medical Society, a veteran of the Civil War, for three terms a member of the State Legislature, owner and editor of the *Hamilton County Leader*, died at his home in McLeansboro, January 25, aged 70.

WESLEY PARK, M. D., Northwestern University Medical School, Chicago, 1867; Jefferson Medical College, 1873; formerly president of the Park Bank at Fieldon, Ill., died at his home in Grafton, Ill., January 18, aged 80.

WILLIAM T. PULLIAM, M. D., Medical College of Indiana, Indianapolis, 1882, of Tuscola, Ill., died in Tolono, Ill., November 30, aged 63.

CHARLES WHITE, M. D., Rush Medical College, 1864, for 57 years a practitioner of Chicago, a member of the Illinois State Medical Society, died at his home, January 21, aged 82.

ROCKWOOD SAGER, M.D., Rush Medical College, 1879; a member of the Illinois State Medi-

cal Society; for thirty-four years a practitioner of Rockford; died at his home in that city, December 2, from brain tumor, aged 57. At a meeting of the Winnebago County Medical Society, December 4, resolutions were unanimously adopted expressing regret at the death of Dr. Sager and sympathy for his family.

TITUS E. YERKES, M.D., Rush Medical College, 1864; a Fellow of the American Medical Association; died at his home in Upper Alton, Ill., November 27, aged 77.

WILLIAM WRIGHT WILLIAMS, M.D., Rush Medical College, 1871; Bellevue Hospital Medical College, 1874; said to have been the oldest practitioner of Mattoon, Ill.; died in the University Hospital, Chicago, November 20, eighteen days after an operation for removal of the prostate gland, aged 66.

CHARLES A. PUSHECK, M. D., Hahnemann Medical College, Chicago, 1880; died at his home in that city, January 1, aged 54.

LEVI SHOEMAKER, M. D., Eclectic Medical Institute, Cincinnati, 1887; died at his home in Wyanet, Ill., December 18, aged 59.

CHARLES M. VERTREES (license, Illinois State Board of Health, 1878); died at his home in Jacksonville, December 22, aged 76.

FREDERICK C. HAGEMAN, M. D., Rush Medical College, 1870; formerly a practitioner of Chicago; died in an infirmary in Mobile, Ala., December 14, aged 69.

ADOLPH E. LINDER, M. D., American Medical College, Eclectic, St. Louis, 1897; died at his home in East St. Louis, December 27, from rheumatic endocarditis, aged 42.

HENRY T. DUFFIELD, M. D., Washington University, St. Louis, 1882; of Pittsfield, Ill.; a Fellow the American Medical Association; died in St. Louis, December 15, aged 60.

HARVEY LE ROY SMITH, PH. G., M. D., College of Physicians and Surgeons, Chicago, 1896; died suddenly at his home in Chicago, January 7, from heart disease, aged 41.

GEORGE W. VAN ZANDT, M. D., Rush Medical College, 1865; for several years a practitioner of Charlotte, Iowa, and later a banker of Chicago; died at his home in the latter city, December 21, aged 80.

JOHANNES G. OOSTERBECK, M. D., Rush Medical College, 1904; formerly of Hysham, Mont.; a member of the staff of Peoria State Hospital for five years; died at the home of his mother in Chicago, January 8, aged 37.

GEORGE F. PARSONS, M. D., College of Physicians and Surgeons, Chicago, 1886; for many years a practitioner of Chicago; died at the home of his daughter in Peoria, Ill., December 29, from cerebral hemorrhage.

JAMES L. REILLY, M. D., Chicago Medical College, 1889; a trustee of the Chicago Industrial School for Girls; formerly a member of the American Medical Association; died in Mercy Hospital, Chicago, January 15, from pneumonia, aged 53.

THOMAS LYMAN PERKINS, M. D., Harvard Medical School, 1880; formerly surgeon to the Salem, Mass., Hospital; later a practitioner of Washington, D. C., and Springfield, Ill.; died in his apartment in the latter city, December 26, aged 62.

SAMUEL PERKEY, M. D., University of Michigan, Ann Arbor, 1862; formerly a practitioner of Eaton County, Michigan; for twenty-five years a member of the medical profession in Chicago; died at his home in Los Angeles, Cal., December 29, aged 73.

FRANCIS REDER (license, Illinois, 1877); a practitioner since 1852; for many years a resident of St. Louis, but for the last few months living on a farm at New Athens, Ill.; died in the Deaconess Hospital, St. Louis, December 28, from chronic interstitial nephritis, aged 84.

WILLIAM BERNHARDT FEHRING, M. D., Rush Medical College, 1903; assistant professor of obstetrics and gynecology in his Alma Mater; a member of the staff of the Presbyterian Hospital; a Fellow of the American Medical Association; died at his home in Chicago, January 10, from diabetes, aged 39.

HENRY BANGA, M. D., University of Basel, Switzerland, 1875; a Fellow of the American Medical Association; well known gynecologist of Chicago; professor of gynecology in the Chicago Policlinic; dean of the attending staff of Michael Reese Hospital; died while attending a patient in Chicago, December 24, from cerebral hemorrhage, aged 66.

NEW AND NONOFFICIAL REMEDIES.

Since publication of New and Nonofficial Remedies, 1913, and in addition to those previously reported, the following articles have been accepted by the Council on Pharmacy and Chemistry of the American Medical Association for inclusion with "New and Non-official Remedies":

Digipoten.—Digipoten consists of the digitalis glucosides in soluble form, diluted with milk sugar to give it a strength equal to that of digitalis of good quality. Digipoten is adjusted by the frog and guinea pig methods to have a strength of 1,400 heart tonic units and by chemical assay to contain from 0.3 to 0.4 per cent digitoxin. The action, uses and dosage of digipoten are the same as those of digitalis. It is sold in the form of a powder, which is soluble in water, and as Digipoten Tablets, each containing 0.03 gm. The Abbott Alkaloidal Co., Chicago, Ill. (Jour. A. M. A., Dec. 6, 1913, p. 2069).

Tannigen Tablets.—Each tablet contains tannigen (see N. N. R., 1913) 0.5 gm. The Bayer Co., New York City (Jour., Dec. 6, 1913, p. 2069).

Bordet-Gengou Bacillus Vaccine for Whooping-Cough Prophylaxis.—Greeley Laboratories, Inc., New York.

Bordet-Gengou Bacillus Vaccine for Whooping-Cough Therapy.—This vaccine is believed to be of service in the prevention and also in the treatment of whooping-cough. Greeley Laboratories, Inc., New York City (Jour. A. M. A., Dec. 13, 1913, p. 2158).

Culture of Bacillus Bulgaricus, Fairchild.—A liquid culture of the Bacillus Bulgaricus. The culture is sold in packages containing 6 and 30 vials, respectively. The culture is used internally in the treatment of intestinal putrefactive diseases and as an application to body cavities in the treatment of suppurative conditions. Fairchild Bros. & Foster, New York (Jour. A. M. A., Dec. 13, 1913, p. 2158).

Slee's Antimeningitis Serum.—For description of Antimeningococcus Serum see N. N. R., 1913, p. 215. The Abbott Alkaloidal Co., Chicago.

Slee's Antistreptococcic Serum.—For description of Antistreptococcus Serum see N. N. R., 1913, p. 216. The Abbott Alkaloidal Co., Chicago (Jour. A. M. A., Dec. 20, 1913, p. 2242).

Since December 1 the following action has been taken:

ARTICLES ACCEPTED FOR N. N. R.:

The following articles have been accepted for inclusion with New and Nonofficial Remedies:

The Bayer Company, Inc.
Elarson.
Elarson Tablets.

Hynson, Westcott & Co.
Sterile Ampoules of Mercury Salicylate.
Salvarsan—606—Ehrlich, Suspension Ampoules.
Neosalvarsan, Ehrlich, Suspension in Ampoules.

Mallinckrodt Chemical Works.
Sodium Acid Phosphate.

Parke, Davis & Co.
Emetine Hydrochloride Ampoules.

Powers-Weightman-Rosengarten Co.
Sodium Acid Phosphate.

Radium Chemical Co.
Radium Chloride.
Radium Sulphate.

CHANGE OF TITLE:

Fairchild Bros. & Foster.
The manufacturer having changed the name Essence of Pepsin, Fairchild to Pepsencia, the Council directed that the corresponding change of title be made in New and Nonofficial Remedies.

ARTICLES OMITTED FROM N. N. R.:

Armour & Co.
Having been withdrawn from the market the Council voted that Glycerole Trypsin, Armour, be omitted from New and Nonofficial Remedies.

Pitman-Myers Co.
Having voted not to accept papain for inclusion with New and Nonofficial Remedies, the Council voted to omit the Aromatic Cordial, P. M. Co. from the appendix to New and Nonofficial Remedies.

Book Notices

INFECTIONS OF THE HAND. A GUIDE TO THE SURGICAL TREATMENT OF ACUTE AND CHRONIC SUPPURATIVE PROCESSES IN THE FINGERS, HAND AND FOREARM. By Allen B. Kanavel, M.D., Assistant Professor of Surgery, Northwestern University Medical School, Chicago. New (2nd) edition, thoroughly revised. Octavo, 463 pages, with 147 illustrations. Cloth, $3.75, net. Lea & Febiger, Philadelphia and New York, 1914.

This second edition is an exhaustive treatise of infections occurring in the hand and forearm. The author has apparently not been satisfied with merely getting these hand infections well, but has strenuously endeavored to get them well with the least possible defect remaining. This point is too often overlooked by the busy surgeon.

The work studies extensively the anatomy as it relates to the pathology. In studying its pages one is reminded that any one may amputate a phalanx finger or hand, but there is skill required to treat infections of the extremities and retain the maximum efficiency of that member.

The book should be read by anyone who is doing factory work or other forms of emergency surgery.

DIAGNOSIS IN THE OFFICE AND AT THE BEDSIDE. The Use of Symptoms and Physical Signs in the Diagnosis of Diseases. By Hobart Amory Hare, M.D., Professor of Therapeutics, Materia Medica and Diagnosis in the Jefferson Medical College of

Philadelphia. New (7th) edition, thoroughly revised and rewritten. Octavo, 547 pages, with 164 engravings and 10 full-page plates. Cloth, $4.00 net. Lea & Febiger, Philadelphia and New York, 1914.

A seventh edition from Hare needs no recommendation. Perhaps the largest number of errors in medicine occur in diagnosis—or in the absence of it. The laboratory, in later years, has been detracting from diagnosis by symptoms, and this is to be regretted.

This work of Dr. Hare studies only the signs and symptomatology of disease. It is a work intended to help the physician make an office or bedside diagnosis, and it fulfills its purpose admirably. Every beginner of the practice of medicine should read the introduction to this volume.

The mechanical make-up is good. We recommend this book to the profession.

THE HOME NURSE. By E. B. Lowry, M.D., author of "Herself," "Confidences," "Truths," etc., Chicago. Forbes & Company, 1914. Price, $1.00.

This little book, as the title implies, is primarily intended for the home where the care of the patient devolves upon the members of the family.

The first chapter covers the preliminaries, thus preparing the nurse for her duties, and also gives many helpful suggestions as to her decorum.

The following chapters discuss the various diseases from inception to convalescence, and give information and instruction as to the use of equipment pertinent to the case in question.

A most important chapter is the one on Accidents and Emergencies. It gives first essentials in an exigency, or until a physician can be summoned, and as there is an alphabetical as well as a classified index, the various subjects may be readily found.

HISTORY OF MEDICINE, with Medical Chronology, Bibliographic Data, and Test Questions. By Fielding H. Garrison, A.B., M.D., Principal Assistant Librarian, Surgeon General's Office, Washington, D. C., Editor of the "Index Medicus." Octavo of 763 pages, many portraits. W. B. Saunders Company, Philadephia and London, 1913. Cloth, $6.00, net; Half Morocco, $7.50, net.

Perhaps as interesting as is the study of medicine, the history of medicine is still more interesting. Who does not become entranced in a reading of Early Egyptian Surgery, or Grecian Medicine—even the Oriental Therapeutists keep the reader entertained.

The author covers practically all the eras of medicine, in a very brief way, down to the present day. The book will be read by anyone who chooses to pick it up, and it is the book you want for a long winter's evening.

PATHOLOGY, GENERAL AND SPECIAL. A Manual for Students and Practitioners. By John Stenhouse, M.A., B.Sc. (Edin.), M.B. (Tor.), formerly demonstrator of Pathology, University of Toronto, Toronto, Canada. Second edition, revised and enlarged; including selected list of State Board Examination Questions. 12mo, 278 pages, illustrated. Cloth, $1 net. Lee & Febiger, publishers, Philadelphia and New York, 1913.

This little volume is intended for a hasty review of pathology and to keep the practitioner in touch with the new. There is a list of questions at the end of the chapter which bear upon the important points reviewed, and thus the student has a quiz course arranged.

The book, of course, is not intended to take the place of a complete treatise on pathology, but rather is a review of a complete treatise, and this purpose is admirably fulfilled. It is a convenient work for either the student or the practitioner.

ANATOMY AND PHYSIOLOGY—A TEXTBOOK FOR NURSES. By John Forsyth Little, M. D., Assistant Demonstrator of Anatomy, Jefferson Medical College, Philadelphia. 12mo., 483 pages, with 149 engravings and 4 plates. Cloth, $1.75 net. The Nurses' Textbook Series. Lea & Febiger, publishers, Philadelphia and New York, 1914.

This little volume is one of the best books for nurses we have seen, comprising as it does the two general subjects.

The difficult task in teaching either of these subjects to nurses is to know how much of the subject to take up. The author has realized this difficulty and seems to have solved the matter in a practical manner.

We recommend the work to the nursing profession.

PRACTICAL SANITATION. A Handbook for Health Officers and Practitioners of Medicine. By Fletcher Gardner, M.D., Captain Medical Corps, Indiana National Guard; First Lieutenant Medical Reserve Corps, United States Army; Health Commissioner of Monroe County, Indiana, and James Persons Sumonds, B.A., M.D., Professor of Preventive Medicine and Bacteriology, Medical Department, University of Texas; Lately Superintendent Indiana State Laboratory of Hygiene. Illustrated. St. Louis, C. V. Mosby Company, 1914. Price, $4.

A book intended rather for the public health officers. Its chapter on History and Method of Quarantine is especially interesting and instructive. The chapter on School Inspection is good, as are also those on shops, factories and penal institutions.

Several chapters on the management of campaigns for the extermination of rats, flies, mosquitoes, bedbugs and other disease carrying vermin are of value.

The book is valuable to all who are doing welfare work, school and visiting nurses, or any one working for the betterment of hygienic conditions.

DIAGNOSTIC METHODS. A Guide for History Taking, Making of Routine Physical Examinations and the Usual Laboratory Tests Necessary for Students in

Clinical Pathology, Hospital Internes and Practicing Physicians. By Herbert Thomas Brooks, A.B., M.D., Professor of Pathology, University of Tennessee, College of Medicine, Memphis, Tennessee. Second Edition, Revised and Rewritten. St. Louis, C. V. Mosby Company, 1914. Price, $1.

An excellent laboratory guide for the practitioner who needs a brief review of his laboratory technique. It is equally good as a working guide to the student. The study of its first pages will benefit the student or interne in taking histories.

THE INTERVERTEBRAL FORAMEN. An Atlas and Histologic Description of an Intervertebral Foramen and Its Adjacent Parts. By Harold Swanberg, Member American Association for the Advancement of Science, with Introductory Note by Prof. Harris E. Santee. Illustrated by 16 full-page plates, none of which have ever before appeared in print. Chicago Scientific Publishing Co., southwest corner Grace and Osgood streets, Chicago, Illinois.

This little volume is devoted to only one part of the anatomy, but a very important part. It is this portion of the anatomy that gives the basis for a number of medical cults.

The author has not given you his views, but has given you histology and anatomy. The plates and photomicographs are exceptionally good and he has been generous with them.

THE PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A.M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume IX. SKIN AND VENEREAL DISEASES, MISCELLAENOUS TOPICS. Edited by W. L. Baum, M.D. Series 1913. Chicago, The Year Book Publishers, 327 South La Salle street.

THE PRACTICAL MEDICINE SERIES. Comprising Ten Volumes on the Year's Progress in Medicine and Surgery. Under the General Editorial Charge of Charles L. Mix, A.M., M. D., Professor of Physical Diagnosis in the Northwestern University Medical School. Volume X. NERVOUS AND MENTAL DISEASES. Edited by Hugh T. Patrick, M.D., Professor of Neurology in the Chicago Polyclinic, Clinical Professor of Nervous Diseases in the Northwestern University Medical School. Peter Bassoe, M.D., Assistant Professor Nervous and Mental Diseases, Rush Medical College. Series 1913. Chicago, The Year Book Publishers, 327 South La Salle street.

These volumes, from the press of the Year Book Publishers, again bring up to date the literature of the day on these subjects. They give the reader a good synopsis of that which has come in medicine during the year.

Price of either volume, $1.35. Ten volumes, $10.

W. B. SAUNDERS COMPANY, Publishers of Philadelphia and London, have just issued a new eighty-eight page illustrated catalogue of their publications. As great care has evidently been taken in its production as in the manufacture of their books. It is an extremely handsome catalogue. It is a descriptive catalogue, telling you what you will find in their books and showing you by specimen cuts the type of illustrations used. It describes some 250 books, including 30 new books and new editions.

A postal sent to W. B. Saunders Company, Philadelphia, will bring you a copy—and you should have one.

DEPARTMENT OF COMMERCE, BUREAU OF THE CENSUS. William J. Harris, Director. "Mortality Statistics, 1911," Twelfth Annual Report. Prepared under the supervision of Cressy L. Wilbur, M.D., Chief Statistician for Vital Statistics. Department of Commerce, United States of America. Washington, Government Printing Office, 1913.

BETTERMENT OF LIFE INSURANCE SERVICE. Proceedings of the Seventh Annual Meeting of The Association of Life Insurance Presidents, held in the Hotel Astor, New York, N. Y., December 11 and 12, 1913.

WOMEN AND MORALITY. By a Mother. Men and Morals, by a Father. The Sexes Again, by C. Gasquoine Hartley (Mrs. Walter M. Gallichan). Introduction by Wallace Rice. 1914, The Laurentian Publishers, Steinway Hall, Chicago.

BOOKS RECEIVED.

E. MERCK'S ANNUAL REPORT of recent advances in Pharmaceutical Chemistry and Therapeutics. Vol. XXVI.

BULLETIN NO. 90—HYGIENIC LABORATORY.

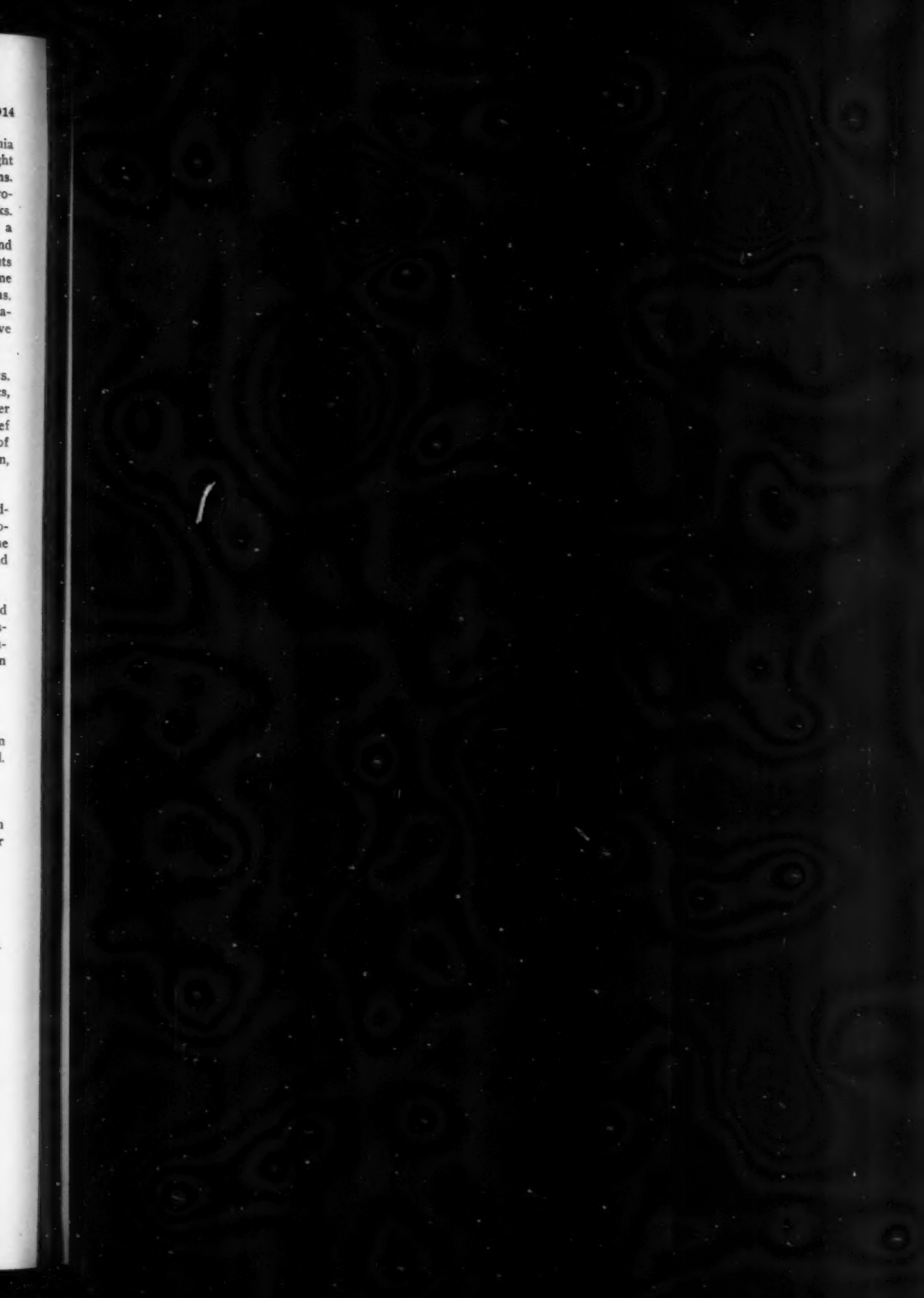
Report from the United States Public Health Service on Epidemiologic Studies of Acute Anterior Poliomyelitis.

I. Poliomyelitis in Iowa—1910.
II. Poliomyelitis in Cincinnati, Ohio—1911.
III. Poliomyelitis in Buffalo and Batavia, N. Y.

Property values are affected by neighborhood cleanliness. Dirt depreciates values.

Many a house with a swell front has a swill back. Take a look at the back yard and the alley.

Score another triumph for preventive medicine!

Typhoid fever—"the Great American Curse"—has been dealt its death blow. The complete eradication of this disease is now regarded as a possibility of the near future.

From Bulletin, Chicago Department of Health.